

# FAMILY AND EDUCATION IN MEXICO

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## **Summary**

*Based on the premise that most children are born and raised within a family, this paper attempts to examine the educational situation of Mexican children between the ages of six and twenty four considering some family characteristics. To do this, at least two main, complementary and interconnected family related stratification processes are acknowledged to affect the conditions for the children's education. The first is related to how the family inserts itself in the social structure and how this may lead to different educational opportunities for children of families belonging to different socioeconomic sectors. The second process analyses the family's internal dynamics and structure, which may lead to different educational opportunities among its members.*

*Using data from Mexico's Population and Household Enumeration Survey – carried out nationwide in 1995–, which considers children as individuals belonging to households, school attendance and school attainment are analyzed according to the children's age and gender. In addition, some sociodemographic characteristics of the households, such as per capita income level, economic activity, rural-urban residence and type of household, are also considered. The family relationship of the child and the coresident sibling size and composition are also examined, seeking to explore a*

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\* Translated by Heidi Cazes.

*method to understand the presence and frequency of gender inequality in educational attainment within the household.*

*In spite of the important expansion in the Mexican educational system over the last decades, the results show the persistence of important educational differences, not only between children from different socioeconomic backgrounds, but also between children living in specific types of households and having a different position within their household.*

**Keywords:** *Mexico, Education, Children, Family structure, Socioeconomic characteristics, Gender inequalities.*

## 1. Introduction

In Mexico, as in many other countries, the limits and access to formal education are significantly determined by the supply of educational services offered by the government. Nevertheless, the access to schools and, more specifically, the extent to which children attend, remain and progress there, are not mechanical processes that respond exclusively to the availability of these services. These processes are influenced by many factors, such as the reality that the subjects of formal education are individuals who generally live in families; and the socioeconomic, cultural and demographic characteristics of these families may restrict, encourage or favor the children's education.

At a time when the Mexican educational system has undergone a significant expansion process, the purpose of this paper is to analyze the current situation of school attendance and its outcome, the grade level attained by Mexican children and young people between ages 6 and 24, in the light of some family characteristics. The results presented here are descriptive, exploratory and preliminary, and are part of a broader research project that aims to study the paths followed during the course of the life of these young people. At this stage, the purpose is to detect and document the educational differences between children and young people in different types of families, without trying to propose –much less prove– some causality hypothesis.

Rather than refer to the broader concept of family, the research in this paper is based on households, as empirically observable units in which people live. Households may differ in many aspects: their in-

come level; the activities by which that income is earned and the material resources required; their composition by age, gender and family relationships between household members. Differences are also found in the internal forms of organization and distribution of tasks, resources, responsibilities and rights between the household members, in order to meet their daily material and affective needs. All these factors define the standard of living and welfare of the household members and the opportunities and limitations for the personal development of each of them. Thus, rather than consider children and young people as isolated individuals, they are seen as part of a household; and their educational situation is related to the environment of the household to which they belong and with which they interact. Due in part to the nature of the data used, special attention is given to some of the socio-economic and demographic characteristics of the household, such as its per capita income level, the economic activity carried out, its urban or rural quality, the family relationship between its members, the number and composition of the siblings living in the household and the child or youth's position in the family.

The information used was taken from the *Encuesta del Conteo de Población y Vivienda* (Population and Household Enumeration Survey), which took place nationwide in 1995. It provides data on gender, age, family relationship with head of household, school attendance status, grade level attained, marital status and age at first union, activity, occupation and income in 332,061 individuals of all ages.

From the individual data, people residing in the same household were identified, and a single record was made with the information of all these individuals. This produced a record of 72,277 households, containing data from all household members. In 77% of the households there is at least one person between the ages of 6 and 24, that is, 55,882 households where 141,769 children and young people that age live. The results presented refer to this data set on households and young people.<sup>1</sup>

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1. It is important to note that although the sample was not designed to represent age, we worked at this level because of the significance of age in educational behavior, and because the main interest of the research reflected in this paper is to outline the life paths followed by the young population. Therefore, the results presented here must be considered to be indications and examples, rather than precise measurements.

## **2. School attendance according to characteristics of the households**

In Mexico, the formal education system is organized in three levels: basic, intermediate and upper. The basic level includes preschool, primary and, since 1993, secondary school. This level is offered free of charge and, excluding preschool, is compulsory for all children. Preschool is for 4 to 5 year old children, and lasts one or two years. Primary school starts at age 6, and lasts six years; and children begin the three years of secondary school between the ages of 12 and 13. After the upper intermediate level, the government also provides free or semi-free education, although this level is not compulsory.

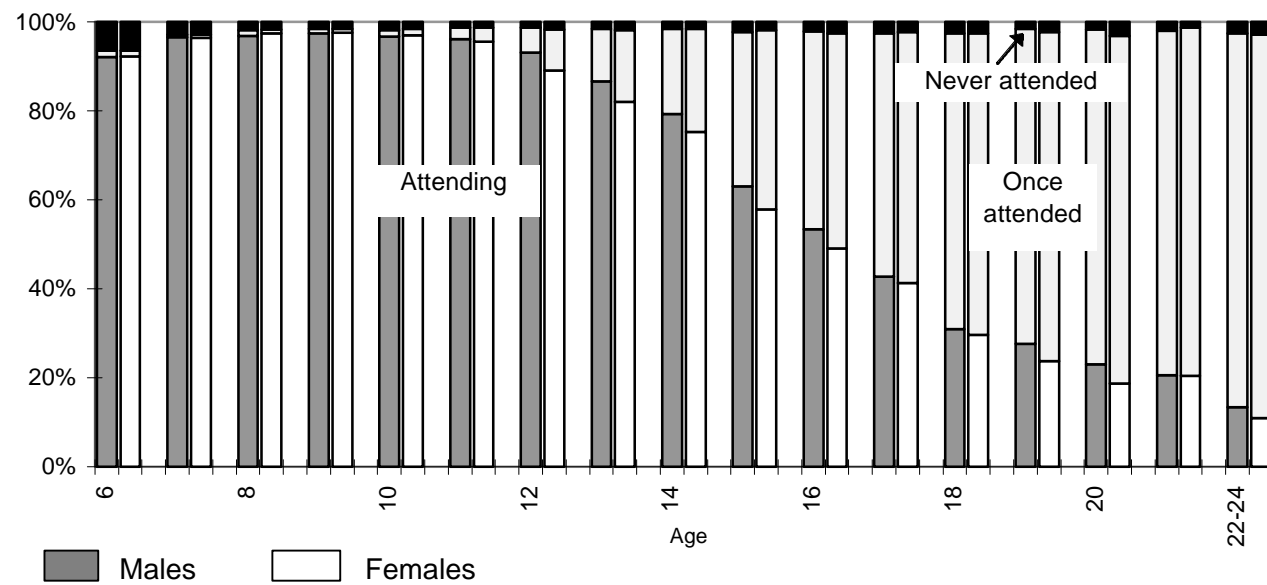
The educational process depends highly on the historic moment, and shows the changes in public education policy and the access opportunities the population has had to schooling throughout time. These changes are related not only to the amount of services offered, but also to their type and quality, what levels and modalities are given precedence, and their distribution in different geographical areas and population sectors. Regarding this, one might say that today's Mexican youth has access to many more educational opportunities than their parents had. During the last three decades, the educational system has expanded greatly. In spite of the accelerated demographic growth at the beginning of this period,<sup>2</sup> educational services increased at a faster rate, and in 1995 more than twice the children received attention than in 1970 (131% more). This expansion took place at all levels of education, resulting in a considerable decrease of illiteracy –from 25.4% of the population aged 15 and older in 1970, to 10.6% in 1995. Likewise, the average level of education in that age group increased from almost 3 years in 1970, to 7.2 years in 1995 (INEGI, 1994, 1996). Nevertheless, in spite of the considerable progress in education during the last years, and although access to schooling is supposedly available to everyone –at least at the basic level–, certain groups of children and young people still experience precarious education situations.

Primary and secondary education are compulsory, adding up to a minimum of nine years during which children should remain in school. This fact, in addition to the prescribed age to enter elementary school

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2. Population increased at a median annual rate of 3.2% in 1965-70, of 2.6% in 1975-80, of 2.1% in 1985-90, and of 1.9% in 1990-95 (Partida, 1998).

Figure 1. School attendance status by age and sex



Source: Calculated from data from Population and Household Enumeration Survey, Mexico, 1995.

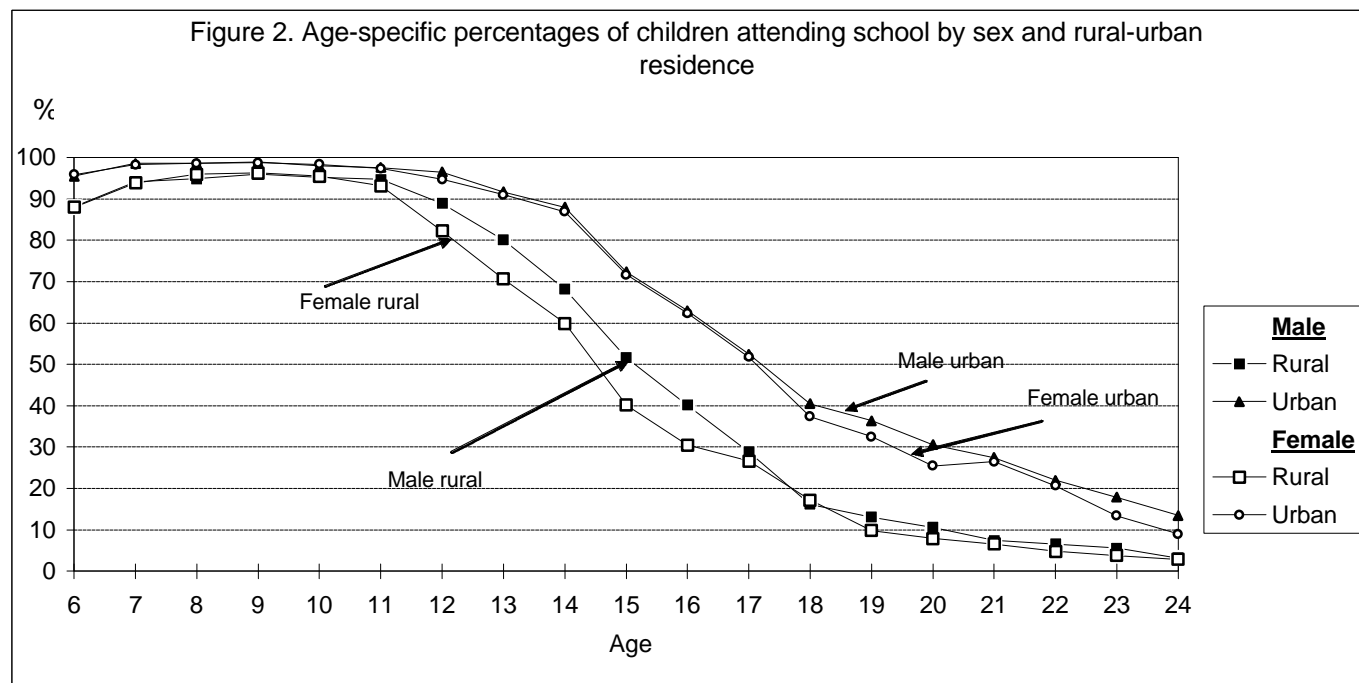
(6 years old), would lead to expect that nearly all children between 6 and 15 years old are attending school. Figure 1 suggests that this is not completely true. The graph shows the proportion of children and young people at each age group between 6 and 24 years old that were attending school in 1995, together with those who attended sometime but dropped out, and those who never attended school at all. As expected, school attendance is high during the early years, when more than 95% of boys and girls younger than 12 years old go to school. Nevertheless, the situation changes after this age and attendance begins to decrease, especially among girls. By age twelve, 93% of boys and only 89% of girls are still in school. As age increases, these percentages decrease, and the gender gap continues; this suggests that school attendance is intensive only during primary education, and at its conclusion, a significant part of the children –more girls than boys– drop out from school. As shown below, finishing elementary school is still the highest educational horizon for many children.

Nevertheless, and perhaps related to the end of secondary education, the most important period for school dropout is between the ages of fifteen and seventeen; thus, while at age fourteen 79% of males and 75% of females still attend school, by age eighteen only almost 30% of males and females continue attending. This means that during that short period, almost half the teenagers quit studying.

The reasons leading to an early school dropout are varied and difficult to unravel. Dropout might be related to different factors, going from educational policies and the characteristics of the services offered, to the child/youth's personal interests, expectations, capabilities and life plans. In addition to this, another factor could be his/her previous academic performance, together with the material and socio-affective support in the context in which his/her life develops, part of which, as has been mentioned, is given by the household; and the characteristics of the household may affect the opportunities to remain in school.

### ***2.1. Attendance depending on the socioeconomic characteristics of the household***

To begin with, the opportunities to attend school continue being very different for the population inhabiting places of different size. Places with less than fifteen thousand inhabitants are considered to be



Source: Calculated from data from Population and Household Enumeration Survey, Mexico, 1995.

rural, and larger places are considered to be urban.<sup>3</sup> Figure 2 shows that although rural children start school later, more than 93% and 95% of rural and urban children between seven and eleven years old attended school in 1995, with not much difference according to gender. This situation changes after age twelve, when rural children are increasingly left behind by urban children; thus, starting age fourteen in females and age sixteen in males, school attendance of urban young people is more than 50% of that of their rural peers of the same age and gender. By age eighteen, the proportion of urban males and females that continue in school is more than twice of that in rural areas.

While living in rural areas presents a disadvantage for the educational development of males and females, this disadvantage is even greater for girls between twelve and sixteen years old –a critical period in which they attend school in about ten percentage points less than their male peers. The gender gap is also present in urban areas, but in less degree, and is seen in older females; thus, while in rural areas it seems to affect female attendance to secondary school and the upper intermediate level, in urban areas it affects mostly attendance to the upper intermediate and upper levels.

Related to the place of residence, the economic activities and income level of the household are quite discriminating variables. As Figure 3 shows, there are great differences in attendance according to the type of economic activity in the household.<sup>4,5</sup> Systematically, children and young people from agricultural households show a lower school attendance than those living in households with other activities; they also start school later and nearly 5% have never attended school at all, compared to 1% or less of children/young people from households

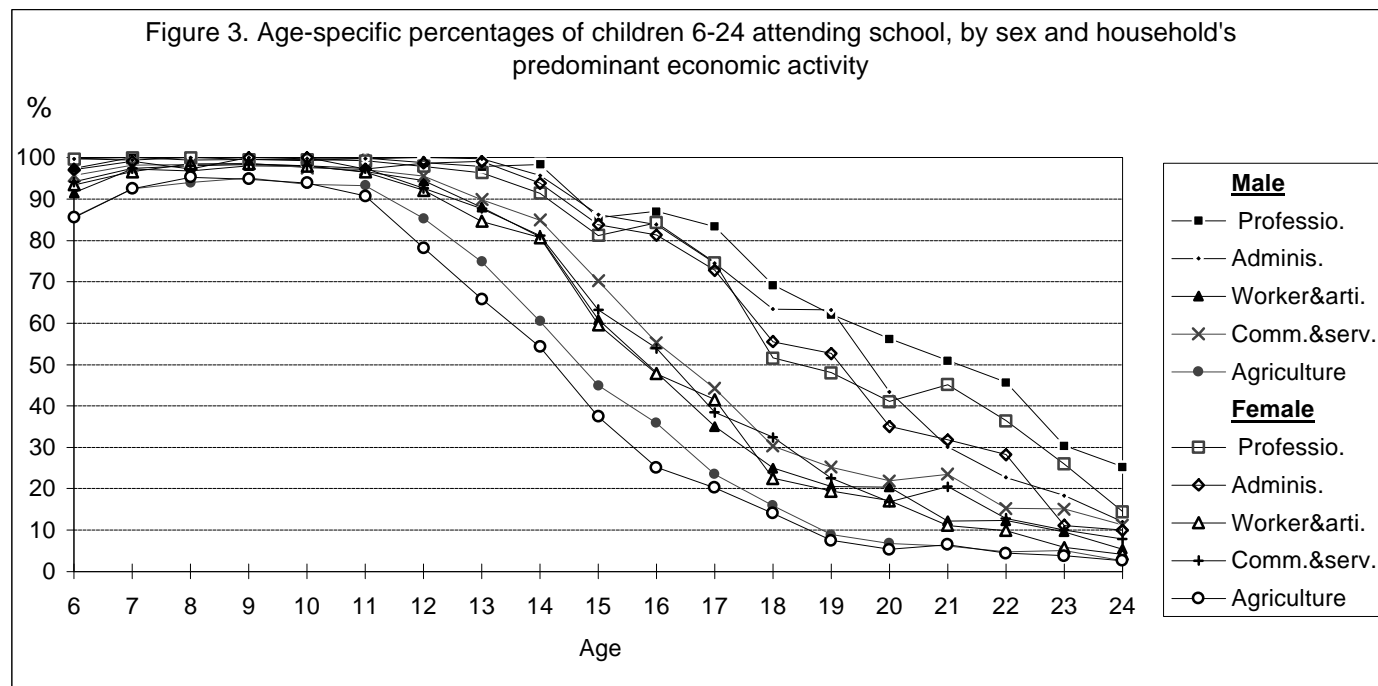
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3. Almost 38% of households with children/young people between ages 6 to 24 are located in rural areas; the rest are urban households.

4. Household economic activity is defined as the occupation of the person who works, when only one of the household members works. Nevertheless, in 40% of the households with children and young people between ages 6 to 24, more than one member works, not always in the same occupation. In these cases, economic activity is defined according to the following priorities: occupation shared by the most members; occupation of head of household; occupation of head of household's partner; occupation of member with the highest income, preferably an adult (more than 25 years old).

5. Economic activities were divided into five categories: a) professional, public officials, managerial, technicians and artists; b) medium and lower level administrative activities; c) workers and artisans; d) trade, sales, personal services; and e) agriculture.





Source: Calculated from data from Population and Household Enumeration Survey, Mexico, 1995.

with other activities. At the early age of twelve, only 85% and 78% of agricultural boys and girls attend school, opposed to more than 94% and 92% of their peers in other activity groups. At the age of fifteen, more than half the agricultural children (55% males and 63% females) have already dropped out from school, leaving it, in the best of cases, after finishing primary education; and at age seventeen, student life has ended for three out of every four males and four out of every five females from agricultural households.

Meanwhile, children and young people who live in households with other economic activities show a high level of school attendance up to age eleven (more than 96%). After that age, two groups appear: one, consisting of children from households formed by professionals or managers, which presents the highest school attendance at all ages; the other, formed by children from households of workers and involved in services/trade, whose school attendance is between that of professional/managerial households and agricultural households. The children from the first group show a similar attendance level until age fifteen, when almost 86% males and 83% females are still studying. However, after that age, in particular after age twenty, school dropout increases in young people from managerial households, perhaps when they have concluded the upper intermediate level of studies or a technical career that allows them to begin working. Meanwhile, young people from professional households seem more likely to continue into higher education. At age twenty one, almost half the young people from professional households and a third from managerial households are still students; one must observe that in both types of households, and at almost every age after twelve, males remain longer in school than females.

In spite of this, more young men and women from these households attend school than those from workers and services/trade households, although the latter constitute the country's largest population group.<sup>6</sup> Although the pattern of school attendance is similar in both these types of households, the situation of children/young people from services and trade households is a bit better than that of workers. In both cases, attendance decreases greatly after age fifteen, perhaps at

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6. The economic activity in 14% of households with children/young people between ages 6 to 24 is professional, technical or managerial; 7% is administrative; 24% is workers and artisans; 31% is in trade or services; 24% is in agriculture.

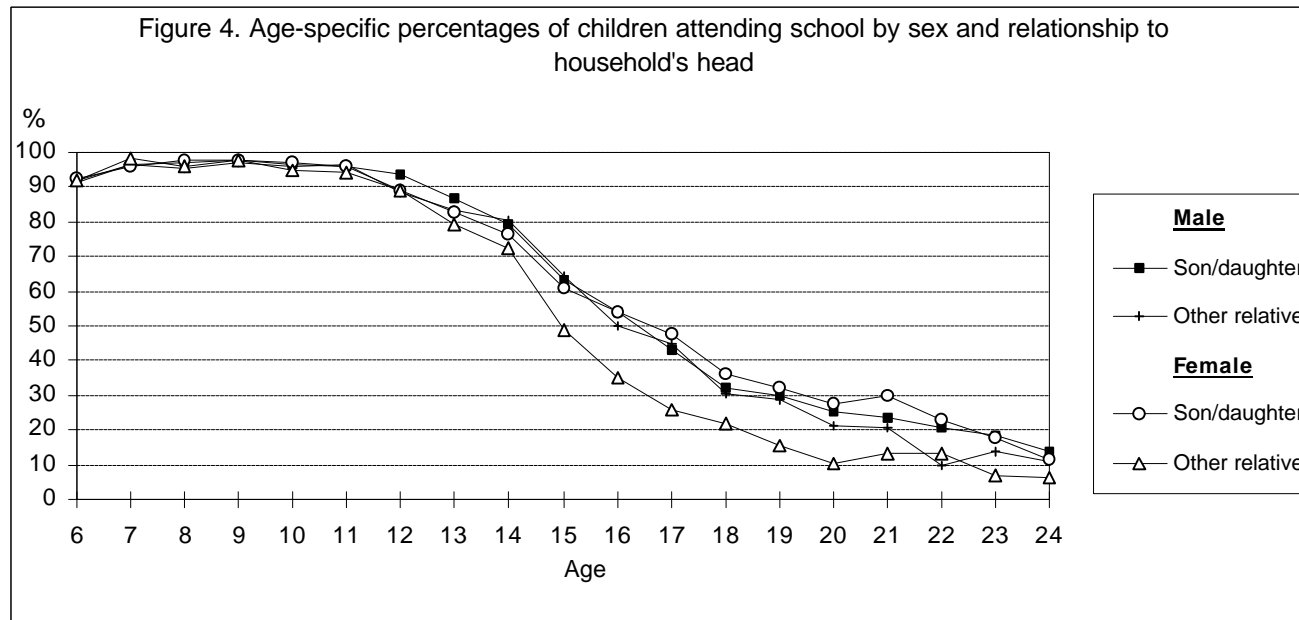
the end of secondary school. At age sixteen, only 48% of young people from worker households and almost 55% of those from services/trade continue in school and, by age twenty, attendance decreases to only one of every five males and one of every six females from both types of households. Nevertheless, it is in these households, particularly in the former, that gender differences in school attendance are less.

## ***2.2. Attendance according to family relationship composition in the household***

When the type of household is classified into five categories, an analysis of the differences in school attendance between complex and noncomplex households seems to show that these differences depend on the experience of the members who are not children of the head of the household. The significance of family relationship in school attendance can be seen in Figure 4.<sup>7</sup> In almost all age groups, the sons and daughters of the head of household show a longer attendance than the children/young people with another family relationship. While in males this difference is not too great, in females it is. From age thirteen onwards, but particularly after age fifteen, other relatives (granddaughters, sisters, nieces, daughters-in-law) remain in school much less time than daughters. At age sixteen, daughters attend school 50% longer than other relatives, and at age nineteen their attendance is twice as much. Unfortunately, the way in which the data was registered –it includes in a single group the wide spectrum of different relatives possible– limits the analysis. Nevertheless, a careful inspection of the data within the context of all the household members suggests that an important part of the other relatives are grandchildren of the head of the household, although there is not sufficient information to treat them as a different type of relationship. On the other hand, it is possible to identify the daughters- and sons-in-law of the head of the household by comparing

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7. At first, three categories of family relationship with the head of household were considered: sons/daughters, other relatives and not a relative. As 1% of young people were in this last category and their school attendance shows a very erratic behavior, they were not included in this analysis.



Source: Calculated from data from Population and Household Enumeration Survey, Mexico, 1995.

the gender, age, marital status and age at first marriage of all household members.<sup>8</sup>

The presence in households of sons- and daughters-in-law –and particularly the latter–, may be due in part to a relatively widespread practice in some areas of the country, where a new couple begins its married life in the household of the male's father. However, there may also be other reasons for this, such as a lack of economic capacity to establish a household of their own. Anyhow, the presence of sons- and daughters-in-law in households may explain part of the great differences in school attendance between sons, daughters and other relatives. In fact, less than 2% of all daughters-in-law and 6% of sons-in-law continue attending school, and account for nearly one fourth of the difference in school attendance between sons and other male relatives, and one third of the difference between daughters and other female relatives. Nevertheless, even if daughters-in-law are not considered, the rest of the female relatives remain in school less than daughters; and it is not clear why, but between males this difference is not so marked.

All this data points to the important role the family relationship may play in school attendance and how the sons and daughters of the head of the household result favored. But there can also be differences among them, arising from the way in which responsibilities, opportunities and resources are distributed within the household<sup>9</sup> and that may favor certain household members over others in some aspects of their personal and family life (Salles and Tuirán, 1995). The differences may also be due to specific aspects and changes in the context and circumstances of the family that each individual faces, which might not always be the same, even for individuals sharing the same household but who experience those circumstances and changes at different moments in their lives (Elder, 1978, 1994; Camarena, 1996). To all this, one must

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8. This allowed to deduce that at least 1.8% of the total of children/young people between ages 6 to 24 (5% and 20% of males and females classified as other relatives) are sons- or daughters-in-law and are found in 7% of the total households with children/young people. It is possible that these numbers are underestimated, for in some cases in which these members could be sons- or daughters-in-law they were not registered as such as their partner was not found in the same household.

9. And can depend on different criteria, such as age, gender, family relationship, cultural traditions, economic or organizational needs, parent's personal preferences, among others.

add the different particular interests, expectations and life plans that each household member, as an individual, might have.

In this vein, different authors have proposed the important role that number, age and gender composition of siblings play in education.<sup>10</sup> This may be due to the competition for the resources and investment in education that can be generated, the implications these may have on the organization of the household, particularly regarding the involvement of children and young people in inter and extra domestic chores and responsibilities, and parental attention and preferences which may change depending on their children's gender or birth order.

The presence of older and/or younger siblings of the same or a different gender may affect the possibilities of attending school. For sons and daughters younger than twenty, being the eldest of all coresident siblings presents an advantage for staying in school. On the other hand, the presence of older siblings and, especially their gender, seems to have a different meaning for males and females. For females, having older sisters seems to be more favorable than having only older brothers and than having older siblings of both genders;<sup>11</sup> for males, being the eldest male, whether the eldest of all siblings or having only older sisters, seems to give an advantage over males with only older brothers or older brothers and sisters.<sup>12</sup>

But what seems to have the greatest impact on school attendance is the presence, or lack of, younger siblings, in particular if there are siblings of both genders. Males between ages thirteen and twenty one who are the youngest in the family, that is, with no younger siblings, attend school between 20% and 64% longer than those with younger siblings of both genders. Likewise, attendance after age fifteen of females with no younger siblings is between 27% and 85% longer than

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10. See Post and Pong (1998) for a review of recent literature and some results in Hong Kong.

11. It is possible that girls with older sisters have a greater opportunity to be allowed not to carry out domestic and economic tasks than girls living in households where there is no other older woman in addition to the mother, especially when there are older brothers and/or younger siblings. Likewise, girls with older siblings tend to belong to larger families, which may allow for a greater delegation of responsibilities and/or a lower participation in family resources.

12. This may be related to the persistence of customs and values that maintain special expectations and give more privileges to the first born male, in addition to the larger number of siblings implicit in the presence of older siblings of both genders.

that of females with younger siblings of both genders. In addition, having younger siblings of a single gender tends to place children/young people at a slight disadvantage in relation to the youngest of all siblings, and at an advantage in relation to those having younger siblings of both genders. But the gender of the younger siblings does not favor or hinder in a defined manner the child/youth's attendance to school. All this suggests that the important factor is the presence or lack of younger siblings and, especially, the number of younger siblings.<sup>13</sup>

When looking simultaneously at the possible combinations of gender and birth order of siblings,<sup>14</sup> and focusing only on children/young people ages twelve and older, one can observe that the females who attend school for less time occupy a middle position between their siblings, are the eldest female, and have older brothers and younger siblings of both genders. Females who have both older and younger siblings of both genders closely follow them. On the other hand, the longest attendance is found in females who are the eldest or youngest of two or more sisters in households where there are no sons, as well as, surprisingly, in females who are the eldest sibling and have no sisters. The difference between females with the longest and the shortest school attendance is so notable, that at age sixteen the proportion of the former more than doubles that of the latter.<sup>15</sup>

Although not so conspicuously, the shortest male school attendance appears in males who have at least one younger brother and

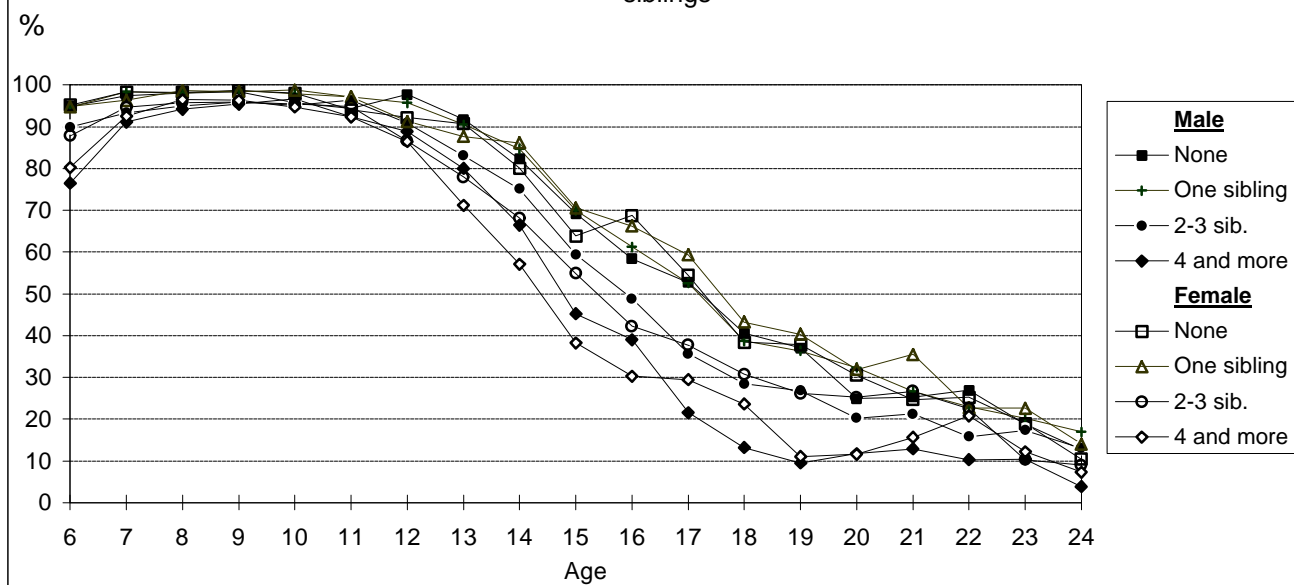
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13. Children/young people with no younger siblings have in average 1.4 siblings; those with younger siblings of only one gender, 2.6; and those with younger siblings of both genders, 4.1.

14. The diversity of possible combinations makes it difficult to produce any type of clear graphic representation, so this part of the text has no graphic support.

15. It is possible that the fact that they do not have to compete with any brothers for the resources allotted for education in the household and/or the greater distribution of domestic tasks that might exist in households where there are only daughters, is an advantage leading to their longer school attendance. Nevertheless, this does not always apply for females who occupy a middle position in birth order, even if there are only sisters. Likewise, the presence of older and younger siblings, particularly when they are of both genders, implies a larger family and a higher demand for the participation of the daughters in domestic tasks after a certain age. This might contribute to the fact that more than half of older or middle sisters drop out from school before reaching the age of fifteen. Also, the relative longer attendance of young women who are first born and the only female could be explained by the fact that most of them have only one or two younger brothers (66% one brother, 26% two brothers), and that being the only female might allow them certain privileges.

Figure 5. Age-specific percentages of children 6-24 by sex and number of co-resident siblings





younger siblings of both genders: this entails a relatively large family and a competition for resources and/or a need for more income generators. Likewise, the longest male attendance is among the youngest of all siblings, as well as among those who have the privilege of being the only male, regardless of their birth order among their sisters.

It is evident from all this that not only the position of the individual among the siblings living in the same household is of significance, but also the birth order among the actual number of siblings. The significance of the number of siblings in school attendance is shown in Figure 5, where four groups of siblings are considered: none, one, two or three, and four or more. It shows the slightly relative advantage of children/young people of both genders with only one sibling over those who are an only child, as well as the large difference in school attendance between the former and those who have four or more siblings. Again, school attendance is similar up to age eleven, but from age twelve onwards the differences begin, increasing according to age; thus, at age sixteen, attendance of young people with one sibling is 60% greater than of those with two or three siblings, and is twice as much as the attendance of those with four or more siblings. Between ages seventeen and twenty, males with one sibling remain in school in a ratio that is 25-50% larger to those who have two or three siblings, and is 2.5 times that of their peers of the same age who have four or more siblings. This confirms that the number of siblings is an important factor affecting school attendance.

### **3. Inequality in grade level according to characteristics of the households**

School attendance is one of the conditions affecting performance in school, but remaining in school up to a certain age does not necessarily imply that a certain grade level is attained. Although the nature of formal education, which follows progressive grade levels, leads to a dependence between the grade level attained and the age of the child/youth, this relationship may vary. It is possible for the individual to start school at a later age or, once in school to follow an irregular path, where there is grade level repetition or a temporary interruption of school attendance.

Table 1  
Average grade level attained in selected ages, household characteristics and children's position<sup>a</sup>

Household characteristics		Male				Female			
		Age:	13	16	19	23	13	16	19
Per capita income	<b>Total</b>	5,7	7,6	8,4	9,2	5,9	7,7	8,9	9,8
	Quartile 1 (lowest 25%)	5,1	6,7	6,9	6,9	5,3	6,5	7,2	7,1
	Quartile 2	5,9	7,5	7,6	7,9	6,0	7,4	8,3	8,3
	Quartile 3	6,1	7,9	8,5	9,3	6,4	8,3	9,3	10,1
	Quartile 4 (highest 25%)	6,5	8,7	10,2	11,4	6,7	9,1	10,5	12,1
Household economic activity	Professional, managerial, technical	6,6	9,1	11,1	12,1	6,8	9,4	10,9	12,5
	Administrative tasks	6,5	9,0	10,6	11,0	6,7	8,9	11,4	12,1
	Trade, personal services	6,0	7,9	8,7	9,6	6,2	8,1	9,0	10,2
	Worker, artisan	5,9	7,6	8,2	9,2	6,1	7,8	9,0	9,0
	Agriculture	4,9	6,3	6,2	6,7	5,1	6,1	6,7	7,0
Rural/urban residence	Rural	5,2	6,7	7,0	7,3	5,4	6,6	7,3	7,5
	Urban	6,2	8,2	9,3	10,3	6,3	8,4	9,8	10,8
Household type	Nuclear conjugal	5,8	7,7	8,8	9,8	6,0	7,9	9,3	10,8
	Single parent	5,7	7,4	8,3	9,4	5,9	8,1	9,3	10,8
	Complex conjugal	5,5	7,3	7,6	8,5	5,6	7,0	8,0	8,5
	Complex single parent	5,6	7,6	8,1	8,9	6,1	7,0	8,2	8,7
	Non nuclear	5,4	7,7	9,4	10,2	6,1	7,1	9,7	9,7

Gender of household head	Male	5,8	7,6	8,4	9,2	5,9	7,7	8,8	9,8
	Female	5,5	7,5	8,3	9,3	6,0	7,6	9,1	9,7
Relationship to household head	Son/ daughter	5,8	7,6	8,5	9,3	6,0	7,9	9,2	10,3
	Son/ daughter-in-law	(a)	(a)	6,8	8,8	(a)	5,8	6,7	7,4
	Other relative	5,3	7,6	8,1	9,3	5,7	7,1	8,6	8,4
	Non relative	(a)	(a)	9,3	10,9	(a)	5,7	8,1	10,1
Siblings position <sup>b</sup>	Only child	5,5	7,5	8,3	9,3	5,9	7,0	8,0	8,9
	Oldest of 2-3 siblings	6,3	8,4	9,5	9,9	6,6	8,7	10,0	11,0
	Middle of 3 siblings	6,1	8,1	8,8	10,3	6,2	8,6	9,6	11,2
	Youngest of 2-3 siblings	6,2	8,0	9,4	9,6	6,3	8,1	9,6	10,6
	Oldest of 4 and more siblings	5,4	6,7	7,5	7,6	5,6	7,4	8,8	9,2
	Middle of 4 and more siblings	5,3	7,1	7,8	9,0	5,5	7,0	8,5	9,7
	Youngest of 4 and more siblings	5,8	7,8	8,8	(a)	5,7	8,5	9,1	(a)
Comparison children/parents	Children <sup>b</sup>	5,8	7,6	8,5	9,2	6,0	7,8	9,2	10,3
	Father	6,0	5,7	5,6	5,3	5,9	5,8	5,9	5,8
	Mother	5,1	5,0	4,6	4,4	5,2	5,0	5,1	4,8

a. Heads, spouses and domestic workers excluded.

b. Only children of head of household.

(a) Less than 1% of boys/girls of the corresponding age.

Source: Calculated from Population and Household Enumeration Survey, Mexico, 1995.

This section focuses on the grade level of children and young people in the country, according to the characteristics of their household and their position in it. The data used considers the average years or grade levels passed until the time of the survey. For practical purposes, it focuses on four age groups: the age in an ideal situation at which the children/young people should have completed each educational level. Following this ideal, it would be expected that at age thirteen, children should have completed at least six years of schooling (primary education); at age sixteen, nine years of schooling (secondary school); at age nineteen, twelve years of schooling (upper intermediate level); and at age twenty three, sixteen years of schooling (a professional career). Table 1 shows the average school grade level attained by young people of these ages.

The first aspect that stands out is the breach between the ideal and the grade level truly attained at each age, as well as the strong differences between children from different types of households. Only children age thirteen come close to attaining the ideal grade level, although neither girls nor, especially, boys from all kinds of households attain the expected six years of schooling. The difference with the ideal increases with age, so that sixteen year-olds have attained, in average, only 85% of the grade level expected for their age, nineteen year-olds only 72%, and twenty three year-olds only 59%; females are slightly closer to the ideal level than males.

### **3.1. Grade level according to the socioeconomic characteristics of the household**

As one would expect, the poorest children and, in particular, those living in households dedicated to agriculture, are the ones who attain the lowest grade levels. By age thirteen, only slightly more than half of these children have been able to finish primary school, showing a low average of having passed only five grades at that age. This situation is in great contrast with that of children belonging to households with a better socioeconomic placement, in particular children in the highest income quartile and children in households dedicated to professional or administrative activities. Among thirteen year-olds in these households, almost 90% have finished primary school and most have already passed a grade of secondary education; at that age they show an average close to 6.5 school grades passed. Additionally, the young people in

the first group seem to live under a schooling threshold that allows only a few to go beyond primary education; thus, at age twenty three, their grade level attained is only slightly above that of thirteen year-olds from more privileged households and does not even reach the complete first year of secondary school (7 years). On the other hand, twenty three year-olds with a higher level of income and those who live in managerial households have passed at least eleven grades of school, while that average is slightly higher than twelve grades for those living in a professional environment. That is, close to the end of the schooling period, this last group has attained between 4 and 5 more years of schooling than the first group. In spite of this, although young people from socioeconomic privileged households attain the ideal grade level by age sixteen, they progressively depart from this ideal as their age increases.

In turn, young people in the two middle-income quartiles, as well as those in households of workers or with trade and service activities, are placed between the two extremes. The grade level attained is a bit higher in trade and service households than in worker households, and a bit higher in third quartile income households compared to those in the second quartile. Even though the grade level of thirteen year-olds from these households is very similar and close to the ideal, twenty three year-olds in this quartile have 1.5 years more of schooling than their peers in the second quartile, while those in trade and services households show an average of 0.8 school years more than those in worker households. The differences between the urban and rural contexts are evident after age thirteen when there is already a one-year difference in the grade level attained between the children in these households, and this difference increases up to three years by age twenty three, with the advantage in the urban environment.

Another aspect worth stressing is the similarity in the number of grade levels passed by males and females and the slightly higher grade level females attain, although after age twelve, females tend to drop out sooner than males. When analyzing the complete set of young people, without considering the differences in their household characteristics, it can be seen that although the percentage of females of the four age groups who are still in school is between 3 to 5 percentage points lower than that of males, the average of grade levels passed by females is slightly higher than those by males.

When dividing according to characteristics of the households, one observes that in very few cases the slightly higher school attendance of males is reflected proportionately in attaining higher grade levels than females. To mention just a few examples, although in professional households the ratio of nineteen year old males who continue studying is 29% higher than that of females, their grade level is only 7% higher than that of females; in households dedicated to agriculture or located in rural areas, sixteen year old males remain in school 43% and 32% longer than females, but their grade level is barely 2% higher. However, the most striking examples, which are also the most frequent, are the instances in which males, although they attend school longer, do not attain the grade level of their female peers. This increases with age, but is present in all age groups and household categories. One example of this are nineteen and twenty three year old males from managerial households who, although remaining in school between 20% and 60% longer than females their age, attain a grade level 5% lower. While in absolute terms these differences are, in general, lower than one school grade, it is still remarkable that, compared to the past, only males older than thirteen who are an only child continue systematically to attain a higher grade level than females, which can also be seen in other household categories, although only in certain isolated age groups.

To sum up, with the exception of children and young people living in a household of professionals, administrators or managers, or whose household is in the highest per capita income quartile and who have accomplished the goal of completing basic education by age sixteen, the situation is still very unsatisfactory. While young people belonging to other household categories are also able to attain that level of schooling, it is at an older age, slightly lagging behind.

In spite of this, just as was presented at the beginning, the educational situation of today's young people is much better than that of their parents. In fact, after age thirteen, most males and females have attained a higher grade level than their parents: at that age, 53% of girls and 51% of boys have attained a higher grade level than their father, and 59% and 56% than their mother. Because of the greater educational opportunities available to today's youth, together with the lower level of education standards of older people, the educational gap between generations increases as the age of young people increases; thus, by age twenty, about 78% of young people of both genders have a higher level of education than their father and 85% have surpassed the

level of education of their mother. The data at the bottom of Table 1 shows not only the difference in grade level attained between children and their parents, but also their inverse relationship. That is, while the children's grade level increases with age, their parents' decreases, thus reflecting the lower educational opportunities that existed as one goes back in time. Additionally, this data shows the lower level of education of mothers compared to fathers, which is the result of the even lower opportunities females had in the past.

### ***3.2. Grade level according to family relationships in the household***

Regarding the internal characteristics of households, it appears to be that until age sixteen, the type of household has little effect on the grade level of males, although males from nuclear conjugal households slightly reach a higher level of education. This is more noticeable at age nineteen, and this disadvantage is shown also among females, for whom the complex conjugal household is clearly the least favorable for educational achievement at any age.

Just the same as regards the length of school attendance, sons and daughters of the head of the household attain a higher grade level than household members with a different relationship to the head. Excluding the head's sons- and daughters-in-law, one can observe that while the difference in grade level between sons and other relatives is small (a maximum of 0.5 year advantage in sons), the difference between daughters and other female relatives is more noticeable. The grade level of daughters is 0.6–0.7 year higher at ages sixteen and nineteen, and 1.9 years higher at age twenty three. The small fraction of young people who are not related to the head of the household (less than 2% of males and females of all ages), is the group of males with the highest grade level, even higher than that of the head's sons. On the other hand, the grade level of females who are not related to the head is lower than that of the head's daughters and other relatives at ages sixteen and nineteen, but at age twenty three it is higher than the level of female relatives and very close to the level of the head's daughters.

The case of young people who in spite of their age already are part of a married couple and live with their parents-in-law, deserves to be

mentioned.<sup>16</sup> It is this group, and particularly the females, that shows the lowest grade level among the different categories of family relationships analyzed. Nineteen year old sons-in-law show only 6.8 years in school (1.7 and 1.3 less than sons and other relatives), but attain up to 8.8 years of school at age twenty three (only 0.5 year less than sons and other relatives). On the other hand, sixteen year old daughters-in-law have not even completed, in average, primary school, and their grade level is 2.1 and 1.3 lower than that of daughters and other female relatives. This difference increases to 2.5 and 1.9 at age nineteen, where their average grade level is only 6.7, and reaches 7.4 at age twenty three, that is, 2.9 and 1.0 lower if compared to daughters and other female relatives.

On the other hand, the fact of belonging to relatively large families –four or more children– seems to show a detriment in the grade level attained by young people. Nevertheless, the impact of the number of coresiding siblings is differential, depending both on the birth order of the individual among his/her siblings and the individual's gender and age. Among the total group of young people, male and female, the lowest levels are seen in males who are the eldest of four or more siblings: they show only 5.4 years of schooling at age thirteen, 6.7 years at age sixteen, 7.5 years at age nineteen, and only 7.6 years at age twenty three. This group is closely followed in the first three age groups by individuals who occupy a middle position between the same number of siblings, who in spite of this are able to attain an average of 9.0 years of schooling at age twenty three, which is the equivalent of a complete secondary education. Among females, the case is reversed, and the middle sister is at a greater disadvantage up to age nineteen, followed by the eldest sister, all this when there are four or more siblings. On the other hand, the negative effect of a large number of siblings is diluted for young people of both genders when the individual is the youngest brother or sister: while at age thirteen their average grade level is below primary school, at age sixteen it is closer to the level of young people from families with two or three children. The latter attain a higher grade level, which at age thirteen surpasses –especially in females– the expectation of having passed six grade levels. Also, the dif-

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16. Although they represent less than 2% of nineteen year old males, they are slightly more than 6% of twenty three year old males. Among females, they represent 3% of 16 year-olds, but 10 and 11% of 19 and 23 year-olds.



ferences within this group are relatively small (a maximum of 0.7 year of schooling); the first born sons and daughters attain the highest levels at ages thirteen, sixteen and nineteen, while there is no defined trend among middle and younger siblings, although middle children attain the highest grade level at age twenty three. Contrary to what one would assume, being an only child does not appear to present an advantage in terms of schooling, as their grade level is lower than that of young people with one or two siblings, and is even closer (and in some cases even below) to the grade level of individuals with four or more siblings.

#### **4. Inequality in level of education within the household**

The educational inequality among children belonging to different types of households and between genders has been clearly seen above, where the unit for analysis has been the child/youth in relation to his/her type of household. It is worthwhile to consider if this inequality is found also among the children of a same household, particularly depending on gender; if all households show an internal bias and how often; and if some types of households tend to be more biased than others. To answer this and be able to see what happens with the young members, it is necessary to look within the households and use the household as the unit for analysis.

To determine if a household is biased or not presents problems due to the varied composition of its members in terms of number, birth order among the siblings, family relationships and personal characteristics, such as age and gender. All these factors not only lead to different needs and opportunities in the case of each individual but also, in the particular case of education, affect the real possibilities of attending and progressing in school.<sup>17</sup> It is necessary to find ways to measure, summarize and be able to compare the different situations of the household members. From a quantitative point of view, and in the specific case of gender inequality in level of education, which depends greatly on the age composition of the children/young people of each

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17. We are referring to how age is a factor in education, which makes it practically impossible, for example, for an eight year old child to have passed more than two or three grade levels.

gender, it would be convenient to use the demographic concept of person-years to find the relationship between the number of school years accumulated by the set of children and young people of each gender up to a certain time, and the number of years of life during which they have potentially been exposed to accumulate those school years. Thus, it is possible to get an approximate idea of the degree to which these young people's grade level compares to what would be expected for their age and, comparing between genders, the ratio of households where the grade level for males and females is the same when compared to those households where a difference according to gender exists.

Following this procedure, Table 2 shows the percentage distribution of households that, having both sons and daughters between ages seven and nineteen, are in each of the three situations mentioned above.<sup>18</sup> The data points to a high level of gender disparity within households in the education of siblings. In less than a third of the households (31%), the education accomplishments of siblings of either gender are similar,<sup>19</sup> while –contrary to what one could believe– in almost 40% the grade level attained by brothers is lower than that of their sisters, while the opposite is observed in only the remaining 29%.

Nevertheless, inequality among siblings varies greatly in different types of households, where households with the best socioeconomic conditions, a traditional structure and few children, prove to be the least biased. Thus, households in the highest income quartile, with a professional, managerial or technical economic activity and only two children, seem to be the most egalitarian, as the sons and daughters in these households are equally educated. In the same measure as was observed regarding school attendance and grade level, the ratio of

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18. This section does not consider young adults in order to avoid an overrepresentation of children who have received more education, especially females, among the children still living in their parents' household after age twenty. This overrepresentation could be due to the fact that after age twenty, an increasing and significant number of young people, particularly females, leave their parents' home in order to get married. It is possible that part of those staying in the household are a select group, with more education, that probably postpone marriage in order to continue studying or for other reasons related to their personal and/or educational development aspirations, or others, who continue studying while married.

19. We considered as similar the cases where the grade level attained by the complete set of siblings of the same gender, in relation to its age, does not exceed by more than 5% that of the set of the opposite gender.

Table 2  
Distribution of households with head's children of both genders ages 7-19,  
according to differences in educational attainment of brothers and sisters

Household characteristics	Brothers less educated than sisters	Brothers and sisters equally educated	Sisters less less educated than brothers	Total
Total	39,6	30,9	29,5	100,0
Per capita income				
Quartile 4 (highest 25%)	32,4	49,8	17,8	100,0
Quartile 3	41,4	32,4	26,2	100,0
Quartile 2	39,7	29,8	30,5	100,0
Quartile 1 (lowest 25%)	42,3	21,2	36,5	100,0
Predominant household economic activity				
Profess., manag., techn.	29,1	52,9	18,0	100,0
Administrative tasks	38,8	40,3	20,9	100,0
Trade, personal services	39,2	34,2	26,6	100,0
Worker, artisan	40,5	30,2	29,5	100,0
Agriculture	44,0	17,6	38,4	100,0
Rural/urban residence				
Urban	38,1	37,7	24,2	100,0
Rural	41,4	22,4	36,2	100,0
Gender of head of household				
Male	38,7	31,9	29,4	100,0
Female	46,1	23,7	30,2	100,0
Household type				
Nuclear conjugal	38,4	32,9	28,7	100,0
Single parent	43,5	23,7	32,8	100,0
Complex conjugal	41,2	27,0	31,8	100,0
Complex single parent	51,0	18,8	30,2	100,0
Number of children 6-24 years old				
Two	30,4	49,4	20,2	100,0
Three-four	39,8	30,2	30,0	100,0
Five and more	46,9	16,6	36,5	100,0

Source: Calculated from Population and Household Enumeration Survey, Mexico, 1995.

households where sons and daughters have the same opportunities of education clearly decreases as income decreases, as the occupational scale decreases and the number of children increases; thus, in only little more than one fifth of the poorest households and in about one sixth of households dedicated to agriculture, or with five or more children between the ages of 6 and 24, the level of schooling of sons and daughters, considering their age, is similar.

Although showing fewer differences, urban households tend to be less biased (38%) than rural households (22%) in the education of their sons and daughters. The same happens in households where the head is male (32%) compared to those where the head is female (24%). This is also seen when considering the structure of the household, a balance in the education of males and females being more frequent in households where there is a couple than in those in which only one adult is present. In addition, within both these groups, the ratio of egalitarian households is greater in those where there are no other members in addition to the parents and the children than where there are more members; this confirms the disadvantage found in complex households. Thus, while in 33% of simple conjugal households there is gender impartiality in education, this amount decreases to 27% in complex conjugal households, to almost 24% in simple single-parent households and to only 19% in complex single-parent households. It is important to point out that the fact that one type of household is fairer more frequently than others does not necessarily imply that school attendance or the grade level attained is higher than in other types of households. It is possible that even when there is an equal opportunity for sons and daughters, those opportunities are so scarce that it is equally difficult to attend school and/or achieve a high level of education for children of both genders.

On the other hand, due to the traditional trends in Mexican society and families to favor the education of males, it would be expected to find this in biased households. This means, that regarding households where the level of education of the children of one gender was more in accordance with their age than in the other gender, there would be more households where the relative level of education of males was higher than that of females. Nevertheless, this is not the case. On the contrary, regardless of the household characteristics, the ratio of households where the educational attainment of the brothers is lower than that of the sisters is always higher; this is the case in 53% to

65% of the different types of households classified as unequal. Even in the households considered to be more egalitarian –that is, the ones with a higher income, professional activities and only two children–, in more than 60% of the part in which inequality is present, the relative level of education of males is lower than that of females. The same happens in households where the head is female, those in urban areas, those where the economic activity is administrative and in trade and services, and those in the third income quartile. In contrast, the greatest inequality prevailing in households dedicated to agriculture, in rural areas and with less income, is shared by males and females. Thus, in 53-54% of unequal households in these categories, brothers are further away from the grade level expected for their age than their sisters, while the remaining 46-47% pertains to households where the greatest difference occurs in females.<sup>20</sup>

All this leads to ask: how can it be explained that although females drop out from school earlier and in a larger proportion than males, they attain the same and even a slightly higher grade level in accordance to their age when compared to males? Among the many possible explanations,<sup>21</sup> it is reasonable to believe that the changes in traditional values (perhaps encouraged in some way by the expansion of the education system), which used to give less value to female education and even questioned the capacity of females to succeed in school, and where in many cases this success became the condition set by parents to allow females to remain in school, may have made it a challenge for girls to prove that they could do well and an incentive to continue in school in a more continuous and constant way than males. Likewise, the shorter time horizon for remaining in school which continues to be prevalent for many females, compared to males, may make females feel that they must advance in their schooling in a constant manner in order not to waste the opportunity and limited time they have been granted.

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20. Although to a different extent, this trend towards a larger ratio of households where the relative level of education of the brothers is lower than that of the sisters continues to hold when the range is extended to consider if there is a similarity in the level of education of males and females, to 10 and even 15%.

21. It is important to note that our data precedes the establishment of the PROGRESA program, which offers monetary stipends to families in a situation of extreme poverty whose school age children stay in school; the stipend is higher for daughters than for sons. This program began in 1997.

Nevertheless, it is important to mention also another viewpoint: the expectations, demands and responsibilities that fall upon sons, be it as helpers in the productive activities of the household and/or as providers of income, that usually are intensified in times of economic crisis such as the country has experienced since the mid eighties.<sup>22</sup> This might interfere with the possibility of following a regular and continuous path in schooling. It is possible that even when, as seen above, males tend to stay in school more years, they perhaps do it in a less continuous and more irregular way than females, lagging more frequently than females in the grade level they supposedly should have attained at a certain age. It is also important to mention the role migration may be playing in certain areas of the country, especially labor migration. Mainly, young males with the highest level of education are the ones who migrate; thus, labor migration may contribute in reducing the average index for the level of education of males, which is calculated from the males who remain in their households and introduces an additional factor of selectivity and complexity into the analysis of educational inequality within the household.

The nature of the data does not allow measuring how differences within the household are the result of necessary strategies to solve the needs of the household or are due to individual choices and motivations, to the academic performance of children and young people, to deliberate parental decisions and preferences, or to any other reasons. Nevertheless, it remains clear that there is something among sons and daughters residing in the same household –whom one might suppose are exposed to the same living conditions, educational opportunities and have similar motivations– that makes formal education a good that some members have more possibilities of attaining and developing than others.

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22. Just as an example, at the time of the survey, more than one fourth of the sons of the head of household who were fourteen years old, worked: 15% only worked while 11% combined work and school. The number of sixteen year old workers increases up to 46% (35% only worked and 11% worked and studied), and up to 65% at age eighteen (57% and 8%). Among females, 10% worked at age fourteen, 22% at age sixteen and 37% at age eighteen.

## 5. Conclusions

This paper has presented some evidence that seems to confirm the prevalence of at least a double stratification process in Mexican children and young people regarding their educational development. The expansion of education services has achieved the incorporation of a growing number of children and young people into the school system and has made them a better educated population sector than their parents. Nevertheless, the evidence presented here shows that significant educational differences prevail, not only in children and young people from households with different socioeconomic backgrounds, but also in children and young people living in different family structures and who also have a different position within their household.

It is evident that this analysis must continue and try to compare and examine together the different variables considered here, thus detecting which variables, individually or in interaction, in addition to other variables not considered here, can explain better the differences in school attendance and in education attainment still prevailing among Mexican children and young people at a time when –at least according to official statements– there is enough infrastructure to provide at least basic education to all children. It is also necessary to learn what other factors –such as those related to the lesser availability of the services of upper intermediate and upper education– prevent young people from attaining higher levels of education, and how these restrictions are related and impact upon boys and girls from households with different socioeconomic characteristics and with different internal characteristics. Equally important is the need to delve into and understand the complex social relationships within households during the daily interaction of individuals of different ages and genders, who have their own needs and interests that not always coincide with, and can even contradict, those of the rest of the household. After all, this creates family environments which may have tensions and conflicts, and where there are arbitrary practices of power and authority which, finally, are the context that allows, or not, children to take advantage or miss the new available education opportunities. This paper is only a first step in that direction.

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