

School Dropout, Adolescent Labor and Family Structures in Mexico

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INTRODUCTION

Mexico experienced important gains in its social indicators during the second half of the past century. Among the principal attainments in education were the rapid increase of the literate population and the increase in the elementary school attendance of children. However, during the nineties, just after attaining almost universal attendance at the elementary level and an average of six years of education, there was a slowdown in educational advancements. At present, there are new concerns on the topic of education within the Mexican context. Half of the children are leaving school early during adolescence (before they turn 17) and the dropout from school coincides for many, mainly for boys, with the entrance into the labor force. In a way, this process of leaving school and working during adolescence points to the fact that Mexican children are experiencing an early transition into adulthood, early from the point of view of the normative standards of at least nine years of compulsory education for all children, as established in the Mexican law, and early as it sometimes occurs at an age when working is illegal (before age 14). This also implies that both transitions (leaving school and entering the labor force) cannot be separated but, on the contrary, should be studied together. The main goal of this paper is to contribute to the understanding of these transitions during adolescence.

Prior studies have given much attention to the effect of the repeated economic crises of the last two decades on people's lives. Studies on survival strategies and on family adaptation to the decline in real income have observed the use of adolescent labor as a

means to compensate for the need of additional income and have implied that adolescent children, mainly boys, may be pushed out of school in order to work (González de la Rocha 1991 and 1997; Benería 1992; Grindle 1991). For girls, the story is slightly different. Girls' participation in the labor market is not mentioned as often as a household strategy. Within this research line, the explanation for the early dropout from school for girls has focused on their greater participation in domestic tasks as a result of the more frequent engagement of adult women in nondomestic jobs.

Families become the intermediary between young adolescents and the socioeconomic context. In the first place, family characteristics define their socioeconomic status, their access to educational opportunities and the possibility of delaying their entrance into the labor force. However, family also influences other aspects relevant to the transitions out of school and into the labor force. The family context defines educational expectations (of parents and adolescents), learning environments, the social and human capital available to adolescents, the expectations regarding gender roles and the access to labor networks. Aside from the socioeconomic resources within households, family characteristics determine the use and distribution of such resources among all family members. This research brings in this other perspective of family studies that has been sometimes overlooked in Mexican social studies in accordance with economic deterministic views. Recent data informs about the need of new explanations, where the analysis of the family characteristics beyond socioeconomic factors may be promising. In fact, recent data suggest that motivational factors, educational expectations and the learning environment may be playing an important role in the school attendance of adolescents. For example, national statistics recently released show that adolescents do not mention their engagement in domestic or nondomestic work as the main reason for leaving school (INEGI 2000a). "Do not want to study anymore" was the most frequent response among Mexican adolescents regarding the reasons for dropping out from school.

Based on these concerns, the specific research question in this paper can be summarized as follows: **how is the enrollment and labor status of adolescent children linked to the organization and characteristics of their families?** To explore the link between adolescents' activities and their families, the study recovers two dimensions of family organization. It considers the potential effect of the absence of one or both parents

and of the working status of mothers¹. Different case studies have suggested that the absence of one or both parents may be related to poverty, to the loss of social capital and to a downward trend in educational expectations as a result of the disruptive experience on intact households. This research looks at the effect of coresidence status relative to the parents, differentiating whether it is the father, the mother or both who do not live in the same household as the adolescent.

In the eighties, Mexico experienced a rapid increase of female labor participation rates. Although mothers still tend to work less often than women with no children, the rate of increase of the participation of mothers has been greater than for other groups. The novelty of the entrance of mothers into the labor force has raised concern on the potential impact over children, especially regarding the health status of young children (Stern, 1996). This study explores the impact of mothers' work on adolescent lives and, specifically, on the probabilities of enrollment and working for adolescent children.

One more element to consider is the gendered aspect of the transition out of school and into the labor force. While there are few gender differences in school attendance among young Mexican generations, the incorporation into nondomestic jobs is highly segregated. Boys tend to work more often than girls and, coherently, there is a concentration in domestic jobs of girls not in school. For that reason, this research explores separately the experiences of adolescent boys and girls.

The analysis for this paper relies mainly on representative data at the national level from the *Encuesta Nacional de Dinámica Demográfica* conducted in 1997. From this nationwide survey, I selected children 12 to 16 years of age, the period during which they are supposed to finish elementary school and start (and finish) secondary school. It is also the period when half of the Mexican children will leave school and it includes the legal age of entry into the labor market. With this national information, I looked at the general trends regarding the educational and labor status of adolescents. I also analyzed the variations in school enrollment, and labor status by selected family characteristics. The use of

¹. This paper is based on the results of a broader research about the influence of family variables on adolescents' enrollment and labor status (Giorguli, 2004). For simplicity, I chose to focus only in these two aspects (coresidence and mother's working status). However, other aspects such as the presence of younger and older children in the household and the presence of extended kin have also a strong influence on adolescents' activities.

multivariate analysis techniques and the addition of control variables in the multivariate models separate the effects of family characteristics from other influences such as socioeconomic factors.

THE INTERSECTIONS BETWEEN FAMILY, EDUCATION AND WORK IN THE EARLY TRANSITION OUT OF SCHOOL

“... people of the same age do not march in concert across major events of the life course: rather, they vary in pace and sequencing, and this variation has real consequences for people and society... kinship and family emerged as a primary source of variation and regulation in life trajectories”. (Elder 1992:1124).

How do family characteristics favor or discourage the early transition out of school and into the labor force? The strongest effect of family on children’s educational/labor status seems to be related to the access to socioeconomic resources. The family becomes the first mediator between the child and the context. It defines his/her socioeconomic status and, thus, the resources available to the child. Specifically regarding school and labor, household resources will determine the kind of education that a child receives, the potential years in school and the need of child labor (domestic and nondomestic labor).

Besides the main source of economic resources, families are the first source of social capital and the locus that defines the primary learning environment of children. Thus, family structure is also linked to aspects such as the educational expectations of children, the access to social capital and social networks, and the type of adult supervision over children’s educational progress and social behavior. Family organization influences as well the allocation of resources and the distribution of responsibilities among the different members of the household.

Coresidence status relative to mothers and fathers

In most studies of Western societies, including Latin America, children living in nuclear two-parent households generally have better educational achievements and attainments, even after controlling for socioeconomic factors. Children seem to be in disadvantage when they live in nonintact nuclear families, that is, mainly when one of their

parents or both are missing due to a separation, divorce, single parenthood, death of one or both parents or abandonment. Evidence from different studies suggests that the negative effect of the absence of one or both parents is reflected in lower academic achievement, lower educational attainment, but especially in more problems at school related to children's behavior (among others, Mc Lanahan and Sandefur 1994; Cherlin 1999; Coleman 1988; Astone and Mc Lanahan 1991; Zill 1996; Shonkoff and Phillips 2000).² What are the mechanisms that lead to this negative effect of the absence of one parent over children's educational progress?

Economic deprivation in one-parent households : the main effect of the father's absence, in this case, would be a lower household income or the uncertainty regarding the financial situation of the household. In most of the developing countries where there is no enforcement of the legal norms (or no norms at all) regarding the provision of pensions when one of the parents, usually the father, leaves the household and where there is little institutional support for single parents, the financial uncertainty may be greater.³ Besides affecting the educational resources available to adolescent children, this economic deprivation increases the need of extra income and might rush the entrance of adolescent children into the labor force.

Decrease in parental supervision and social capital: the absence of one of the parents from the household may result in less parental supervision. In nonintact nuclear families, the parent in the household generally needs to work outside the home; therefore, he or she has a large time constraint regarding children's supervision. This means a reduction in the parents' surveillance over children's educational progress and behavior and a lower parental involvement in their development. The decrease in adult supervision is related to both educational achievements (such as test scores, Zill 1996) and school related problems that increase the risk of dropping out of school (Astone and Mc Lanahan 1991).

² . Cherlin (1999) and Zill (1996) point out that living in nonintact nuclear families **increases the risk** of having problems at school, but this does not mean that the majority of children in this kind of family experience such educational disadvantages.

³ . There is little information on this topic for the situation in Mexico. However, there is some evidence that in most of the cases, single mothers are the sole financial providers for their children after a separation or divorce (Brachet 1996; Stern 1996).

Educational expectations and motivation in school: The absence of one of the parents from the household might also imply a loss in terms of social networks and extrafamilial resources for children, so that children are involved in fewer social relationships and organizations (Coleman 1988; Entwisle, Alexander and Olson 1997). Although household characteristics outweigh outside resources in explaining school attainment, the access to extrafamilial social capital (from extended family members and friends) might still have a positive effect on children's educational outcomes (Hofferth, Boisjoly and Duncan 1998)

Usually, the transition from an intact to a nonintact nuclear household is preceded by a context of emotional upheavals and disturbed social relations, which might cause stress, depression and/or behavioral problems in children (Astone and Mc Lanahan 1991; Jonsson and Gähler 1997; Zill 1996). Their educational progress affected, it is possible that children lower their educational aspirations, which have proved to be one of the main determinants of educational outcomes (Entwisle and Alexander 1993; Entwisle, Alexander and Olson 1997). Children with none of their parents in the household are in the most detrimental position in terms of educational outcomes (Zill 1996). Usually, living with none of their parents reflects a previous situation of neglect, abuse or turmoil.

Changes in household responsibilities: The absence of the father may be related to greater labor participation rates for the mother. If that is the case, it might increase the participation of children, especially daughters, in housework and childcare as substitutes for the working mother. A similar argument can be applied when the mother is absent from the household. Given the traditional gender division of labor, when the mother is absent it is possible that elder daughters may take over the responsibilities of housework and childcare, especially when there are no other adults around to help out with such duties.

There are two elements that might mitigate the possible negative impact of children's greater participation in housework and childcare when the father is absent and the mother is working. First, single mother households tend to be smaller and house chores and childcare might be less demanding than in other types of households. Therefore, studying and working at home might be compatible for those children responsible for house chores. Second, single mothers tend to distribute more equally the resources among the

different household members. For example, the responsibilities of housework and care of younger children when the female head is working outside the home seem to be more evenly distributed among sons and daughters. If the responsibilities are shared, again studying and participating in housework and childcare might be compatible.

Social networks (regarding labor opportunities): The absence of either parent means a decrease in the extrafamilial resources and social networks available to children. In the case of their insertion into the labor force, it might mean less access to labor opportunities, as those networks might be critical during adolescence. It is probable that the loss of social networks related to job opportunities has a larger impact on boys, as they tend to work in nondomestic jobs more often than girls, and especially when the father is absent.

Women's access to resources and single motherhood⁴: The distribution of resources and responsibilities among family members varies when the mother has a greater say in the decisions of such distribution. When the father is absent, women do not have to negotiate with or subordinate to their husbands' decisions regarding the use of resources. This situation might even compensate to a certain degree the economic deprivation resulting from the absence of the father. In fact, Chant (1997) suggests that although household income might be lower in single-mother households, the income used for household needs might be higher.

For what has been said so far, there is a strong incentive to keep children in school for longer periods in single-mother households. To what extent can children accomplish the educational expectations that their mothers have for them? Participation rates of adolescent children may be greater in single-mother households. It seems, however, that single mothers try to reconcile studying and working (Chant 1999; González de la Rocha 1999). Thus, we could expect to find more often adolescent children in this type of households working and studying simultaneously.

⁴. When adolescent children live in female-headed households, usually the head of the household is their mother and the father is absent. In fact, from the data set used for this paper, close to 90% of the female heads were the mothers of the children, and in close to 70% of the cases where only the mother was at home, they reported to be the heads of the household.

Mothers' work and children's well-being

A first direct impact of mothers' entrance into the labor force can be an increase in household socioeconomic resources. Nonetheless, this potential impact depends on other household characteristics, especially the coresidence status relative to fathers. In dual parental households where both parents work, the income from mothers' labor may in fact represent an improvement in the household economic situation. When mothers are the sole economic providers for their children (for example, when the father is not in the household), they are more vulnerable and dependent on their jobs than in dual-earner households. In such cases, the mother's income may be hardly enough to compensate the economic deprivation resulting from the absence of the father. Nonetheless, we could expect children living in mother-only arrangements where the mother does not work to be in the most disadvantaged situation regarding the access to socioeconomic resources.

Another possible effect of the increase of household resources due to mothers' entrance into the labor force on adolescents' educational/labor status is that the additional income might reduce the need of children's labor—for example, in dual parental households—delaying the entrance of children into the labor force.

The engagement of daughters or sons as substitute child caretakers of younger siblings: As mentioned earlier, one of the probable caretakers of children when mothers work outside the households are elder siblings. If that is the case, does having younger siblings and a working mother affect children's educational status? To what extent is it compatible to take care of younger siblings and stay in school? It is possible that elder siblings taking care of the youngest have lower educational attainment and find it more difficult to stay in school.

The influence of mothers' labor status in the shaping of children's roles and expectations: Mothers might be playing an important role of socioeconomic achievement for their children, especially for their daughters (Kalmijn 1994). Prior studies cited by Kalmijn (1994) pointed out that daughters of employed mothers in the U.S. tended more often to name their mothers as roles. However, this effect varies by mothers' occupational status and is true in particular for women in managerial or professional positions. When mothers

work, their children—especially their daughters—might be encouraged to keep on studying in order to find a good job in the future. We find here an interaction between socioeconomic status (reflected in occupational status) and the possible effect of mothers' employment on children's educational outcomes, as those mothers in higher status occupations might be more attractive role models for their daughters than those in lower occupations.

*The reduction of the mother's time with children*⁵: in most Western societies, including Mexico, the mother is still the main socializing actor in children's life, specifically during early childhood. This has led to a popular belief of a negative effect of the mother's absence from the household on the children. In fact, several studies have found a negative effect of the mother's employment over the intellectual development of children (Kalmijn 1994; Desai, Chase-Landsdale and Michael 1989; Blau and Grossberg 1992) especially during the first years of life. Nevertheless, the evidence is not conclusive and some studies point out that the negative effect of the mother's absence tends to disappear or is reversed in later years (Leslie 1987; Haveman Wolfe and Spaulding, 1991; Kalmijn 1994).

The increase of women's management of household resources: when women work they tend to use a higher proportion of their income in the family and the well-being of its members compared to men. Women also tend to use an important share of their income on their children's education. If mothers' earnings or resources are more directly invested in children, we could expect that even after controlling for household income, children would be better off when mothers work.

Specifying the research question

How can we study the link between the enrollment and labor status of adolescents on one hand and the family variables of interest on the other? The answer to this question leads us to consider how to specify the main independent variables in this research

⁵. There are several empirical studies regarding the effect of the reduction of mother's time with and supervision over children during the first years of life (Blau and Grossberg 1992; Desai et al 1989; Desai and Jain 1994; Short et al 2000). There are few studies, however, studying the effect through educational transitions later in life, which is the matter of interest for this research.

(coresidence status relative to parents and the effect of the mother's labor status). We know, for example, that the effect of the coresidence relative to parents is different depending on who is the absent parent or if both parents are absent. Therefore, we should consider separately coresidence status relative to the father and to the mother. On the topic of the mother's labor status, we also know that the effect on the children's lives will depend on whether the father is present (dual-earner arrangements), or the mother is the sole or main provider for the children (which is usually the case in mother-only households). Based on these ideas, the analysis in this paper will group the categories of coresidence status relative to parents and the mother's labor status into a sole variable which will include the following categories: (1) both parents at home, mother not working; (2) both parents at home, mother working; (3) only father at home; (4) only mother at home, not working; (5) only mother at home, working; (6) neither parent at home. Table 1 shows the distribution of the sample cases across the different categories of coresident status relative to parents and mother's working condition. The table also includes some selective characteristics by type of household.

The dependent variable is divided into four categories, which depict four possible scenarios regarding the transition out of school and into the labor force: (1) only studying (no transition into adulthood), (2) working and studying, (3) only working, (4) not working nor studying. The last category has a different meaning for boys and for girls. Boys in this category may have left school for non job-related reasons. For girls, falling into this category will suggest greater household responsibilities incompatible with attending school.⁶

⁶. One limitation of the data source used is that it does not provide separate information on the participation in domestic labor. For that reasons, the category "not working and not studying" is used as a proxy, specially in the case of adolescent girls.

Table 1. Distribution, average years of parental education and household income by type of family and mothers' labor status. Mexico, 1997

Type of family and mothers' labor status	Percentage	Education (years)	Household monthly income (pesos)	Household per capita income (pesos)
Both parents at home:				
mother not working	45.9	5.6	2,498	414
mother working	29.6	6.7	3,602	655
Only father at home	2.5	6.5	2,845	605
Only mother at home:				
mother not working	4.7	5.1	2,174	388
mother working	10.7	6.6	2,629	562
Neither parent in the household	6.6	6.0	2,828	517
Total/ Grand means	100.0 (37,227)	6.0	2,946	512

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

Note: Parental education is the average years of education of both parents in dual parental households, of the parent present in monoparental households and of the head when no parent is present.

Main hypotheses

Table 2 summarizes the expected direction on the relationship between family variables and adolescents' enrollment and working status. Because many of the comparisons in the literature refer to traditional arrangements (dual parental households, mother not working) and how children's context and opportunities change in nonintact families compared to traditional households, the effects reflected in the table refer to how we can expect a positive or negative impact on studying or working in nontraditional arrangements compared to a traditional arrangement.⁷ One of the difficulties in building table 2 was the methodological problem of capturing the contradictory effects of family variables on what adolescents are doing regarding school and work. Building the table

⁷. The results of the multivariate analysis later in this paper follow the same logic.

meant in some cases, taking a decision considering that one or other mechanisms may have a greater influence on the final result. Still, in some other cases, the final influence was not so straightforward. In such cases, I decided to keep a question mark to represent the operation of contradictory mechanisms that make the final effect uncertain.

Table 2. Expected directions of the relationship between family variables and adolescents' enrollment and labor status

<i>Variable</i>	Enrolled and not working	Enrolled and working	Not enrolled and working	Not enrolled and not working
Both parents at home:				
mother not working				
	(comparison group)			
mother working	+	+	-	?
Father only at home	-	-	+	+
Mother only at home:				
mother not working	-	?	?	+
mother working	-	+	?	?
Neither parent in the HH	-	-	+	+

Note: The signs reflect expected changes (positive or negative) on the probabilities of falling into either category of enrollment and labor status. For the case of the family type categories, the changes are in relation to the comparable probabilities in traditional arrangements (dual parental household, mother not working).

Both parents at home, mother working: Children living in this type of household may have access to higher resources than children in traditional arrangements. The participation of mothers in income generating activities may result in more resources devoted to children's education (as suggested by prior studies) and may result in greater educational expectations for children, especially for the daughters. Given the positive effect on children's education and the greater access to resources, the fact that mothers work in dual parental households may translate into a longer stay in school during adolescence. Still it may also increase the probabilities of working and studying as relation to working mothers

also imply greater labor networks for the children, especially in dual parental households where the participation of mothers in nonwaged jobs is greater. In summary, adolescent children of working mothers may be delaying their exit from school, but may be combining work and school given the increase in labor networks.

Table 2 shows an uncertain effect regarding the category “not enrolled, not working”. If mothers’ work increases enrollment in the dual parental household, we would expect to find fewer adolescents “not working, not studying” in this type of household. However, in this case, there are two ways through which the mother’s work may be having the opposite effect. Both, for boys and for girls, there may be a reduction in adult supervision when mothers work. This may result in less surveillance over the child’s educational progress or behavior at school, increasing the risk of leaving school for non job-related reasons. For girls, the absence of the mother may mean an increase in household responsibilities, which may be incompatible with school.

Only father at home: According to what has been said in this chapter, children in this type of arrangement will have fewer educational opportunities and may be leaving school earlier as a result of the lower access to resources and less supervision. We may expect more adolescent boys and girls in this type of arrangement to be not working nor studying or only working, although they may be leaving school for non job-related reasons. For the specific case of girls, we may also find a greater participation in household chores and childcare of younger siblings than in households where the mother is present.

Only mother at home, not working: Adolescents in this kind of arrangement may also be in a less favorable position regarding their educational progress and, thus, their enrollment. Children may be leaving school because of the restrained access to resources, the loss in social capital and the lower educational motivations that may result from the absence of the father or from the disruptive experience. Therefore, we may find lower enrollment and greater “idleness” among adolescent children in households where the father is absent and the mother is not working.

Regarding the participation in the labor force, the result may be more uncertain. It is possible that this kind of household is in a greater need of adolescents’ income.

Nonetheless, the participation of adolescents in the labor market may be constrained due to the lower access to labor networks and social capital. That would explain the question marks on table 2 for the categories related to working status (enrolled and working; not enrolled and working).

The absence of the father increases the say of the mother on the distribution of resources, which may result in a later transition out of school for children. In this case, mothers may be facing the lack of resources with a greater incentive to keep their children in school beyond their elementary education. The combination of work and school may be a solution, but the access to labor networks and job opportunities may still restrain the chances of combining both activities.

Only mother at home, working: The difference between the preceding type of household and this one is that the mother has access to greater resources and to more social networks than households where the father is absent and the mother is not working. Although children in this type of arrangement may be in a better situation regarding their opportunities of staying in school as a result of mothers' work, there is still the question of to what extent it may compensate for the consequences of the absence of the father. We would expect that adolescent children in this type of household still have lower chances of staying in school and not working than children in traditional arrangements. It may be the case that as a result of the greater access to labor networks, adolescents combine work and school more often than adolescent children in traditional households. Therefore, the need to find a job may not necessarily affect adolescents' enrollment. Nevertheless, it is still uncertain whether children in this type of household will have to leave school more often to work (and fall in the category "not enrolled and working").

Children in this type of arrangement may also be leaving school for non job-related reasons such as behavioral problems at school. In the specific case of girls, an additional effect may be the greater participation in household chores and supervision of younger siblings when mothers are working. Still, the access to resources through mothers' work and the greater say of mothers on their use may mitigate these potential negative effects. For that reason, I put a question mark on the expected final direction of living in this type

of arrangement compared to traditional households for the category “not enrolled and not working”.

Neither parent in the household: Children in this type of family arrangement will have the most disadvantaged position regarding their opportunities of staying in school. They may have to start working at earlier ages and they may have a greater participation in household chores and responsibilities, especially in the case of adolescent girls.

FAMILY, EDUCATION AND WORK AMONG MEXICAN ADOLESCENTS

Let’s look now at the data for the specific Mexican case. Table 3 shows the distribution of boys and girls in 1997 by enrollment and labor status. Around one third of all Mexican adolescents (between 12 and 16 years of age) had left school and/or were working in the survey year. Although there is practically no gender difference in the enrollment, there is a difference regarding the labor status. As prior studies have suggested, boys tend to be working more often than girls. In fact the percent of boys working (30.8%)—either in school or not in school—is twice as high as that for girls. In contrast, close to one in every five girls reported to be not working nor studying. The incorporation into the labor market is gender segregated in Mexico even from this early age. The larger participation of boys in income-generating activities agrees with prior evidence that boys’ labor has been used in Mexico more often than girls’ as a strategy to increase household income.

Regarding family arrangements, living in traditional dual parental households (mother not working) represents an advantage for adolescent boys and girls as shown by the larger percentage not working and still enrolled in this type of household (table 4). Nonetheless, we found that mothers’ work has a very positive effect in terms of delaying the exit from school. Even in households where the father is absent, the potential negative effect on school enrollment is mitigated when the mother is working.

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

<i>Variable</i>	Enrolled and not working	Enrolled and working	Not enrolled and working	Not enrolled and not working	Total
Boys	62.7	12.7	18.1	6.4	100.0 (18,952)
Girls	66.3	5.6	10.0	18.1	100.0 (18,275)
Total	64.5	9.2	14.2	12.1	100.0 (37,227)

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

We did find that, when the mother works, adolescents tend to work more often. Nonetheless, in many cases they combine work and study; this reflects in high enrollment rates among children of working mothers. We can even forward that while in some contexts there might be a need to increase household income through adolescent labor—specially for boys, there is still a strong incentive to keep them in school, and this incentive coincides with the fact that the mother is working.

Boys are at a greatest disadvantage in educational terms in “only mother, not working” arrangements. The reasons can be the lower access to economic resources, the fewer social networks but also motivational aspects. In fact, it is among this type of household that the “idleness” of boys is the greatest. In contrast, adolescent girls were in the most vulnerable situation when the mother was not at home. The lowest enrollment rates corresponded to girls who lived in “only father” and in “neither parent at home” arrangements; furthermore, they tended to concentrate in domestic work as shown by the fact that close to one third of these girls were neither working nor studying.

Mothers' labor status also had an impact on girls' working status. If the mother was working, there were higher proportions of working daughters. When the mother was not working, in dual parental or only mother households there were greater proportions of daughters devoted to housework. The explanations can be, on one hand, the access to networks in the female labor market when the mother works and, on the other, the role models set by working and not working mothers. It is possible that when the mother follows a traditional role and stays at home to look after the house and the family, girls are expected or expect to fulfill a similar role.

Table 4. Educational and labor status of boys 12 to 16 years of age, by type of family and mothers' labor status. Mexico, 1997 (percent)

Type of family	Enrolled and not working	Enrolled and working	Not enrolled and working	Not enrolled and not working	Total
BOYS					
Both parents at home:					
mother not working	65.0	9.1	18.8	7.1	100.0 (8,970)
mother working	60.3	19.1	15.8	4.8	100.0 (5,490)
Only father at home	58.7	12.6	20.8	7.8	100.0 (499)
Only mother at home:					
mother not working	59.9	9.7	21.2	9.2	100.0 (895)
mother working	65.4	12.6	14.9	7.1	100.0 (2,004)
Neither parent in the household	55.4	13.4	23.7	7.6	100.0 (1,094) (18,952)
GIRLS					
Both parents at home:					
mother not working	69.4	2.1	7.6	20.9	100.0 (8,105)
mother working	65.9	10.5	12.0	11.6	100.0 (5,549)
Only father at home	57.7	3.1	12.0	27.2	100.0 (418)
Only mother at home:					
mother not working	63.0	2.8	9.9	24.3	100.0 (851)
mother working	67.9	8.5	10.6	13.0	100.0 (1,986)
Neither parent in the household	51.9	4.3	14.6	29.1	100.0 (1,366) (18,275)

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

The data in table 4 suggest that the transitions out of school and into the labor force for adolescent boys and for girls are different. Nonetheless, there are some common aspects regarding family arrangements. Children are at an advantage in dual parental households. We hypothesized that mothers' working status may have negative effects. The data suggest that mothers' work enlarges household resources and has an especially positive effect on sons' and daughters' enrollment. There is an effect due to SES. The descriptive statistics in table 1 showed that households where mothers work have greater *per capita* income and a higher parental education. The multivariate analysis in the next section will help discern to what extent this positive effect of mothers' work on children's enrollment persists even after controlling by SES and other variables.

We found that networks are important in terms of the transition into the labor force and are related to the sex of the child. For boys, the presence of the father seems to be more important in terms of finding a job. For adolescent girls, the working status of the mother is an important determinant of their participation in nondomestic jobs. In fact, for daughters, there might be a process of following the role model of working or nonworking mothers.

We hypothesized in the preceding section that having only the mother at home might transmit a different impact on adolescent children depending on the working status of the mother. The descriptive statistics offer plenty of evidence to support this hypothesis. In fact, the most vulnerable households seem to be the "mother-only, not working" arrangements. In contrast, children of single mothers who are working are not at a disadvantage compared to those in dual parental households. As we saw in the chapter, this type of household enjoys a higher SES in general, which indicates that we are dealing with mothers who might have had greater access to resources even before the disruption of the union.

A main question that should be clarified in the next section is to what extent the relationship between family arrangement and adolescents' educational/labor status is reflecting the effect of other variables such as size of the location and SES. The following multivariate analysis should help us disentangle a little bit more the mechanisms operating behind these first results.

RESULTS FROM THE MULTIVARIATE ANALYSIS

Given that the dependent variable (enrollment and labor status of adolescents) is categorical, the multivariate analysis is based on the estimation of multinomial logistic models. The multinomial logistic model fits the analysis proposed for this work given the categorical nature of the dependent variable. The multinomial logistic model pairs each response category (j_i) with a baseline category (J). The model estimates the log odds that the response is j compared to the baseline category J . The form of the model is (Agresti 1996:206-207):

$$\log\left(\frac{\pi_j}{\pi_J}\right) = \alpha_j + \beta_j x, \quad \text{where } j=1 \dots J-1.$$

The baseline category is chosen arbitrarily. For this dissertation, I used the category “not working and enrolled” as the baseline category. Since the main hypotheses point out that the expected relationship between the dependent variable and the type of family arrangement varies by sex, the models are estimated separately for boys and for girls. I also estimated pooled models to test whether there were significant differences in the effects by sex (results not shown).

The independent variables to be included in the model can be grouped in four: individual characteristics, family arrangement and other characteristics, SES (based also on household indicators) and community (or municipal) level variables. Table A.1 in the Appendix present the complete models. Finally, to facilitate the interpretation of the results from the multinomial logistic models, I estimated the probabilities for the main independent variable of interest: coresidence status relative to parents and mothers’ labor status (see table 5). All the probabilities were estimated using the mean value of the other covariates.

A first conclusion from the tables is that, in fact, living in a traditional household (with both parents and mother not working) delays the exit out of school and the entrance into the labor market for children between 12 and 16 years of age, even after controlling for several other factors. However, we also found that the early transition into work is not necessarily in detriment of school enrollment. Following the structure of the arguments

presented in a prior section, the main results from the multivariate analysis can be summarized in the following:

Table 5. Simulated probabilities of studying and/or working by type of family and mothers' labor status. Boys 12 to 16 years of age. Mexico, 1997

<i>Variable</i>	Enrolled and not working	Enrolled and working	Not enrolled and working	Not enrolled and not working
BOYS				
Both parents:				
<i>mother not working</i>	74.7	8.4	11.1	5.8
mother working	73.0	10.3	10.2	6.5
Only father	59.0	14.0	19.0	8.0
Only mother:				
mother not working	68.6	10.7	13.8	6.8
mother working	69.1	12.1	11.6	7.2
Neither parent	62.6	11.9	17.6	7.9
GIRLS				
Both parents:				
<i>mother not working</i>	76.6	2.3	5.5	15.6
mother working	76.7	5.1	6.8	11.4
Only father	64.0	3.2	8.1	24.7
Only mother:				
mother not working	67.8	3.5	10.3	18.4
mother working	66.6	7.7	8.7	17.0
Neither parent	52.4	3.5	11.5	32.5

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

Note: Simulated probabilities based on the multivariate models estimated (see Table A.1). The probabilities were estimated using the mean value of the other independent variables. Table 5 shows in bold type those cases where the differences in the effect of a type of family compared to the reference category (both parents at home, mother not working) on the dependent variable were significant.

Both parents at home, mother working: the positive effect of mothers' work in dual parental households is largely explained by socioeconomic factors. Once we added controls, we found no significant difference between this type of household and traditional arrangements in terms of the probabilities of studying and not working.

We found, however, that when the mother works, children tend to start working at earlier ages, without affecting the general probabilities of enrollment. Even though children are working more often in this type of household, the change is explained to a great extent by the combination of school and work. The influence of mothers' work in accelerating the entrance of children in dual parental households into the labor force is stronger for girls. In addition, we found that when the mother is working, girls tend to fall less often in the category "not enrolled and not working" than in traditional arrangements.

That the differences between children in dual parental households where the mother works and where she does not work prevail even after controlling for socioeconomic variables suggests that there are other mechanisms operating in these relationships. Labor networks of working mothers seem to be reflected in greater employment opportunities for adolescent children, especially daughters. However, that the effect for daughters is stronger than for boys may also be suggesting the influence of a role model on the educational and labor expectations of adolescent girls.

In the theoretical section, I hypothesized that mothers' work may also result in a higher number of adolescent children not enrolled and not working because of the lessened supervision of children when the mother works and because of a possible greater participation in domestic jobs. The multivariate analysis does not support any of these hypotheses.

Only father at home: the results in this case follow the expected direction presented in table 2. Children in this kind of arrangement have lower probabilities of attending school and of not working. Again, we find that this effect is stronger for girls. The results support the idea of greater household responsibilities for girls when the mother is absent, in detriment of their school enrollment. However, it is also possible that girls may be leaving school for other reasons besides their participation in domestic labor. The absence of the mother may result in lower educational expectations, affecting their educational

opportunities. It is interesting to note that this negative effect of the absence of the mother on enrollment occurs only for girls.

Only mother at home, not working: in the descriptive statistics we have found that children in this kind of households were at a large disadvantage in term of postponing their transitions out of school and into the labor force. This negative impact is mainly due to the constrained access to socioeconomic resources in this type of households. In fact, there were no significant differences in the probabilities of enrollment with traditional arrangements once we added controls. We did not see either greater probability of “not enrolled and not working” for boys and for girls.

Based on the results, we do not find any evidence to support the idea of lower educational expectations or less adult supervision, which may affect adolescents’ enrollment when the father is absent and the mother is not working. In fact, it is possible that these results support what Chant (1991) had seen before in her interviews of Mexican single mothers. That is, that the greater autonomy of single mothers regarding the distribution of resources may be benefiting children in terms of their time in school, to the extent of somewhat compensating for the absence of the father. The main disadvantage of children in this type of arrangement is related to the lack of socioeconomic resources.

Only mother at home, working: there is little difference in the probabilities of enrollment between adolescents in traditional households and adolescents whose mothers work and whose fathers are not at home. As expected, we see a greater combination of school and work for both, boys and girls, when the mother is working and again we find that such effect is stronger for girls.

As with single mothers who do not work, we do not find any evidence to support the idea that the absence of the father may accelerate the transition out of school, although we do see greater probabilities of experiencing a transition into the labor force when the father is absent and the mother works. The difference again may lie in the greater access to labor networks for children of working mothers.

Neither parent in the household: the multivariate analysis confirmed that children in this type of household tend more often to leave school and start to work during adolescence than children in other arrangements. We found that the effect is stronger for girls and that it may be reflecting the greater participation of girls in domestic jobs (in detriment of their school enrollment) when they do not live with their parents.

SUMMARY AND FINAL REFLECTIONS

The main goals of this paper can be grouped in two. First, it explores two main aspects of adolescents' lives in Mexico: their school attendance and their labor status. Second, it links these aspects to the coresidence relative to their parents and to the working status of mothers. Why focus on adolescence? From the point of view of the Mexican context, most of the children will be leaving school and/or starting to work in their early teenage years (before they turn 17). Furthermore, recent evidence from prior research in Mexico underlines the importance of studying adolescence to understand such transitions (leaving school and working).

The characteristics of the family can be located among the main determinants of children's educational progress. First of all, family characteristics determine the access to socioeconomic resources. Besides its influence through the access and availability of resources for the adolescent, the family also defines other aspects related to children's progress in school and to their entrance into the labor force. It defines the learning environment, parental and child expectations regarding school, the supervision over the adolescent's educational progress and behavior outside of school, and the social capital available to the child. From the point of view of the labor participation of adolescents, besides the need of extra income within the household, its composition also influences the labor networks available to adolescent. The analysis of the link between family type—in this case regarding the coresidence status relative to parents—and adolescents' enrollment will give a more detailed understanding of how the transitions out of school during adolescence occur in the Mexican context.

The literature on survival strategies has also stressed changes in family organization, which are of interest for this research: **the entrance of mothers into the**

labor force. In Mexico, this process has occurred at a rapid pace at least during the last two decades. There have been studies of the impact of mother's work on the family (for example, studies on domestic violence, on the effect on child's health, among others). This work shares the goal of this prior research in terms of understanding possible changes or new forms of organization as a result of the entrance of mothers into the labor force and its impact on other members of the household. Among the possible changes due to mothers' participation in the labor force and directly related to adolescents' activities, is the reorganization (and redistribution) of household duties. If mothers are absent from home, who undertakes the responsibilities of household chores and childcare? There is little evidence of changes in the participation of husbands in domestic work. Again, the literature on family survival strategies suggests that adolescent children, especially daughters, may assume more responsibilities regarding housework and childcare. In this respect, the greater time and energy devoted to domestic work may lead to an early dropout from school, even before the completion of middle school. The results of this study indicate that mothers' work may be having the opposite effect on daughters' enrollment. Partially due to the increase of household resources through women's participation in nondomestic employment, we observed that when the mother is working, the probabilities of enrollment beyond age 16 are higher. This result is not exclusive for girls; the positive impact of mothers' work on enrollment applies to both sexes.

Aside from the direct effect explained by the greater access to socioeconomic resources, this research found that the influence of mothers' work may be explained by other factors such as the greater say of mothers on the allocation of household resources. Although there is a diversity of experiences in this respect, the general perception is that mothers tend to be more child-oriented and that their greater access to resources may increase the investment in children's health and education.

One of the interesting results is that the participation of mothers in nondomestic jobs increases, at the same time, the probabilities of enrollment and the probabilities of working among adolescents. We know little about the meaning of the combination of work and school during the adolescent years. Nonetheless, the possibility of combining both activities may have a positive effect on the final educational attainment of children. Furthermore, the greater access to labor networks and to flexible jobs compatible with

school may be of special importance for the combination of both activities in contexts of constrained resources.

Although the influence of mother's work operates in the same direction for boys and girls, I found that the effect is stronger for girls. A straightforward explanation is that the access to labor opportunities for women (in this case, adolescent girls) may be strongly related to the access of networks through other women involved or related to the labor market. In contexts such as the Mexican one, where female participation in nondomestic jobs is still low, women may rely more often on other women to enter the labor market. However, another explanation is the importance of mothers as role models for their adolescent children.

In spite of the common conception of adolescent labor as a household strategy to augment resources, this research supports prior evidence regarding the preference of boys' participation in nondomestic work over girls' participation. Cultural issues related to role models and the traditional division of labor permeate girls' and their parents' expectations regarding what they do during adolescence and beyond. In this respect, working mothers may expect their daughters to work (now or later in the life course) and, when the mother works, there may be less opposition to the participation of girls in nondomestic employment.

This work does not explore directly the issue of female headship; however from the data we know that in most of the cases when adolescents live only with their mothers, the latter reported to be heads of the household. Female headship and the absence of the father from the household are related to greater vulnerability as a result of the economic deprivation and the possible social distress associated with the dissolution of a union. For the Mexican case, we found that the impact of the absence of the father may differ depending on the mother's labor status. First of all, mother-only arrangements where the mother works are positively selected by socioeconomic status. Both, the *per cápita* income and the education of the head are greater than those of traditional arrangements (both parents at home, mother not working). On the contrary, single-parent arrangements where the mother is not working are negatively selected in both aspects. The different access to socioeconomic resources depending on mother's labor status when the father is absent results in different enrollment and labor rates among adolescents. In fact, the descriptive

statistics show that boys are in the least favorable situation regarding school attendance in mother-only arrangements where the mother does not work, while we can see only a small detrimental effect when the lone-mother is working, compared to traditional arrangements.

To an extent, we can even say that the fact that the mother works may compensate partially for the negative impact of the absence of the father on enrollment. In fact, mothers' participation in nondomestic jobs does make a big difference for adolescent children. In a context of little institutional support for lone mothers and of erratic economic participation of absent fathers, it is possible to imagine a scenario where children leave school in order to work. However, this research points out that the main explanation of this effect of lone-motherhood on enrollment lies in the different access to socioeconomic resources. Furthermore, once we added controls, we saw that there was practically no or little differences in the enrollment and labor status of adolescents in "mother only not working" arrangements.

This work also analyzed two other family situations: **the absence of the mother from the household (father-only arrangement) and the absence of both parents.** Children in this last type of arrangement were in the most detrimental situation regarding their education. Although a small percentage, they still represent around 7% of the sample. We would need further research to know the factors involved in the absence of the parents (orphanhood, internal or international migration, abandonment) to understand the reasons for such an adverse position. Father-only arrangements were uncommon. Still we saw that children, especially girls, tend to leave school more often in this type of households. In addition, the effect remains for girls even after adding controls. In fact, the absence of the mother seems to be related to an increase in the participation of girls in domestic labor.

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APPENDIX

Table A.1. Multinomial logistic regression predicting educational and labor status. Boys 12 to 16 years of age. Mexico, 1997

Variable	Enrolled and working		Not enrolled and working		Not enrolled and not working	
	Boys	Girls	Boys	Girls	Boys	Girls
Age: 12-13	-0.824 **	-0.790 **	-2.793 **	-2.495 **	-1.320 **	-1.756 **
14-15	-0.374 **	-0.292	-1.010 **	-1.046 **	-0.441 **	-0.589 **
16	--	--	--	--	--	--
Migrant	-0.139	0.245	0.170	0.498 **	0.276 **	0.357 *
Younger children	0.115 **	0.140 **	0.200 **	0.257 **	0.155	0.207 **
Older boys	-0.238 **	-0.289 **	-0.132 **	-0.102	0.056	0.131 **
Older girls	-0.171 **	-0.063	-0.130 **	-0.050	0.121	0.021
Both parents:						
mother not working	--	--	--	--	--	--
mother working	0.231 *	0.782 **	-0.058	0.219 *	0.142	-0.318 **
Only father	0.746 **	0.501	0.778 **	0.568 *	0.567	0.639 **
Only mother:						
mother not working	0.327	0.543	0.308	0.752 **	0.252	0.291
mother working	0.444 **	1.334 **	0.121	0.602 **	0.296	0.229
Neither parent in the HH	0.527 **	0.794 **	0.639 **	1.124 **	0.492 **	1.115 **
Other income earners	0.292 **	0.229 **	0.255 **	0.235 **	0.079	0.056
Other nonworking adults in the HH	-0.376 **	-0.590 **	-0.277 **	-0.649 **	-0.070	-0.243
Family-owned business	2.718	2.533	1.659	1.257	-0.298	0.482
HH migration to the U.S.	0.194	0.279	0.256 *	0.137	0.376 **	0.218 *
Parental education Ln (income)	-0.109 **	-0.098 **	-0.236 **	-0.217 **	-0.218 **	-0.227 **
Size of the community:						
Less than 2,500	0.321	-0.071	0.915	0.780	0.013	0.603
2,500-99,999	0.003	0.084	0.359 **	0.633 **	-0.004	0.226 *
100,000 or more	--	--	--	--	--	--
% EAP in manufactures	-0.004	0.006	0.015 **	0.020 **	0.020 **	0.020 **
% of women working	0.017 **	0.022 **	0.001	0.022 **	-0.010	-0.013 **
Constant	-2.540 **	-4.496 **	-0.171	-2.184 **	-0.631	0.442

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

Wald Chi2(63)= 3742**

Pseudo R2=0.2330

* p<0.01

** p<0.001