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## **The role of ethnicity in father absence and children's school enrollment in Guatemala**

### **Abstract**

Despite the historical prevalence and recent rise in female headship in Latin America, our knowledge of the magnitude and consequences of father absence as experienced by children has been extremely limited. Using a nationally representative sample from Guatemala, this study first documents the prevalence of father absence in children's households and non-resident fathers' lack of paternity establishment and child support payments. Second, a series of multi-level logistic regressions demonstrates that father absence has a stronger negative effect on school enrollment for indigenous than for Ladino children. The increased poverty in father-absent households explains a smaller proportion of this adverse effect for indigenous children, suggesting that the fathers of indigenous children play a stronger social than economic role compared to their Ladino counterparts. However, children who receive child support payments are no longer less likely to be enrolled in school than children in two-parent households regardless of ethnicity.

## **Introduction**

Single motherhood has been historically common in Latin America due to a relatively high incidence of un-partnered childbearing and equally high dissolution rates, especially among consensual unions. Recent studies show that single motherhood has become even more common over the past few decades (Arriagada 2002; Ali, Cleland et al. 2003), suggesting that an ever larger proportion of children are growing up in father-absent households. The rise in the prevalence of father absence in children's lives merits attention from policy makers if its adverse effects on their well-being are established. The negative consequences of father absence for children that have been shown in past studies include poor academic performance, lower overall educational attainment, psychological and behavioral problems, and early marital and non-marital childbearing (for a recent review, see Sigle-Rushton and McLanahan 2004). However, much of the evidence comes from the U.S. and other developed nations, and the fortunes of Latin American children brought up in single-parent households have been less well known despite its significance in the region.

The present research provides both descriptive and analytic documentations of father absence, using a large, nationally representative sample from Guatemala. Guatemala is characterized by the dual nuptial system where formal and consensual unions have coexisted since the colonial period. Although it experienced one of the largest reductions in the proportion of consensual unions in the region over the last two decades, approximately one third of all unions are still consensual (Castro Martin 2002). Many consensual unions are similar to formal unions in reproductive behaviors; however, they are known to be less stable due to the lack of legal commitment, contributing to a high proportion of single mothers (Goldman 1981; Goode 1993). The Guatemalan population is divided into indigenous and Ladino groups of roughly

equal sizes. Indigenous people, alternatively called “Maya,” are the descendents of pre-conquest natives and are primarily concentrated in rural and remote areas, where they have kept an ancestry-based identity and strong community ties and are resistant to the influence of the national Ladino culture. Ladinos are mixed race individuals between indigenous people and the Spanish conquerors and are usually characterized by wearing Western clothing and speaking Spanish. The distinction between indigenous people and Ladinos is mainly cultural; however, Ladinos monopolize the dominant commercial, cultural, and political positions and marginalize the indigenous people, resulting in a ‘caste’ society with one of the highest prevalence of poverty in the region and the highest degrees of stratification in the world (Bossen 1984).

Guided by the insightful ethnographic accounts of two distinct patriarchies by ethnicity in Guatemala (Maynard 1974; Bastos 1999) and the growing body of work that establishes the significant roles of race and ethnicity in family arrangements and father-child relationships elsewhere (McLanahan 1985; Furstenberg 1995; Ishii-Kuntz 1995; Parke and Buriel 1998; Schwartz and Finley 2005), this study attempts to explore the heterogeneity of family relationships in Guatemala through comparisons between indigenous and Ladino children in their experiences of father absence and its consequences on their welfare in two steps. The first section of this paper documents the prevalence of father absence in children’s lives by ethnicity. The first indicator of fathers’ lack of involvement in children’s lives is their separate living arrangements from their children. While this is probably the most researched measure of father absence, there are various ways of assessing the levels of commitment to the children among non-resident fathers (Cabrera, Tamisk-LeMonda et al. 2000; Marsiglio, Amato et al. 2000). This study considers paternity establishment and child support payments. Economic support is important in alleviating poverty in father-absent households (Amato and Gilbreth 1999; Bartfeld

2000; Argys, Peters et al. 2001), which is arguably one of the most significant disadvantages suffered by lone mothers and their children. Paternity establishment has symbolic, social importance in Latin America because the lack of paternity establishment forces children to bear a visible emblem of being fatherless attached to their names. While children recognized by their fathers are entitled to have two surnames, children whose paternity is not established are not able to inherit their fathers' surname and are left with only one surname given by their mothers (Werthemer 2006). Furthermore, paternity establishment is crucial for mothers to legally claim child support payments from the fathers of their children<sup>1</sup> (Argys and Peters 2001; Budowski and Bixby 2003). These three measures of fathers' commitment to their children together provide a more complete picture of father absence in Guatemala.

The second section of this work assesses the implication of father absence in children's households on their welfare, which is measured by school enrollment status. Particularly in a less developed country like Guatemala where agriculture still dominates the economy, even young children are often considered to be an important labor contributor in the household, and enrolling them in school closely reflects substantial resources available for, and a high level of parental commitment to, these children. A cross-national comparison in Latin America indicates that Guatemala has the comparable net enrollment rate for primary education (94%); however, the net enrollment rate for secondary education is 35%, which is the lowest figure in the region (UNESCO Institute for Statistics 2008), despite secondary education being also compulsory in Guatemala. Education is one of the most important mechanisms by which ethnic and gender inequalities are transmitted and reinforced over generations in Guatemala (Hallman, Paracca et al. 2005) and constitutes a powerful and important indicator of children's long-term socioeconomic well-being. It is important to examine how father absence might interact with gender and

ethnicity in its potential effects on children's school enrollment given the prevalence of female-headed households in the region.

How school enrollment might be affected by father absence in children's household is examined separately for indigenous and Ladino children in order to elucidate potential ethnic differences in the father's roles in children's well-being. In addition, whether or not fathers' non-co-residence has differential effects by the sex of the child is also explored. Since, as will be shown, fathers' separate living arrangements negatively affect their children's enrollment in school, this research further investigates whether this negative effect operates through the increased poverty in the single-parent households or through a lack of a social role associated with fathers (Sigle-Rushton and McLanahan 2004). Lastly, it examines whether or not the adverse effect of father absence in the household is mitigated by child support payments from non-resident fathers.

This study takes full advantage of the 2002 Guatemalan National Survey of Maternal and Child Health (ENSMI), which incorporated new, unique questions on co-residence status with fathers for all the living children of the respondents in the sample; paternity establishment and economic support for children under the age of 18 who do not reside with their fathers; and current school enrollment status for all living children aged 5 to 15. First, a series of cross-tabulations is presented to gain a descriptive understanding of father absence, which is defined by three separate variables: fathers' non-co-residence with their children, non-resident fathers' lack of paternity establishment and child support payments. Subsequently, the effect of fathers' non-co-residence on the children's current school enrollment is assessed using multi-level logistic regression models. The multi-level modeling adequately estimates the effects of child-, mother-, and community characteristics, while taking into account the similarities in the outcome

among the children of the same mother and of the same community. To my knowledge, this study constitutes the first attempt to investigate both prevalence and consequences of father absence in Latin America based on a large and nationally representative sample, which treats children as units of analysis.

### **Father absence in Latin America: Past studies**

The cultural construct of masculinity in the region, called “machismo,” originated in the sexual exploitation of indigenous women during the Conquest and has played an important role in subsequent family arrangements particularly among mestizos, or Ladinos, who are the products of such exploitation (Hardin 2002). The machismo ideology emphasizes male strength, liberty, and sexual forwardness as important ingredients of male identities and often encourages men to father children to demonstrate their success in the pursuit of women (Fuller 2000). The legacy of patriarchal ethos that the conquerors brought from pre-industrial Spain defines the father’s role as being a protector and sole provider of his family, which in turn legitimize his authority in the household. However, this ethos has ironically resulted in a further increase in union instability and childbearing outside of unions in the face of modernization and its concomitant economic instability in Latin America. Rapid industrialization and urbanization have produced a large number of unemployed males, leaving these men without economic resources to fulfill this patriarchal father’s role (Kaztman 1992; CEPAL 1995; Arias and Palloni 1999). Furthermore, urbanization along with the expansion of mass media created aspirations for a higher standard of living, which many urban migrant males were not able to achieve for their families. In addition to this, modernization has also increased female labor force participation and cash acquisition while at the same time men’s economic activity has either declined or remained about the same. As a result, the Ladino males’ breadwinning role has been eroded (Arias and Palloni 1999;

Barker 2003), and machismo has become an even more important means to reconstruct their masculine identities, increasing the abandonment of mothers and their children (Bastos 1997).

However, ethnographic work on men and the constructs of masculinity in Latin America cautions against stereotyping Latin American men as irresponsible husbands and fathers. It has shown that men do participate in parenting (Gutmann 1996), family life is an important element of men's masculine identities (Henoa 1994), and although men's abandonment of families did not cease, it began to be questioned (Gutmann 2005). However, because the gendered division of labor exempts fathers from emotional investment in their children and assigns them authoritative figures in the household, even "responsible" fathers are hesitant in actively seeking an affectionate role, especially toward their daughters, resulting in a great distance between fathers and their children (Bronstein 1984; de Keijzer 1998; Fonseca 1998; Fuller 2000).

In contrast with the Ladino counterparts, indigenous families have been often characterized by "responsible" patriarchy, stronger paternal dyads, and more egalitarian partnership (Maynard 1974; Bastos 1999). In this traditional cultural model of the indigenous household, the source of fathers' authority in the household is less the satisfactory fulfillment of their breadwinning role than their commitments to their families as well as to their communities, where they take on significant social and ceremonial roles (Wolf 1966). The economic responsibility to sustain the household is shared between husbands and wives among indigenous people, and their economic partnership works to strengthen the union, rather than to undermine it (Nash 1970; Paul 1974; Cabrera Pérez-Armiñán 1992; Glitenberg 1994). Furthermore, women are not perceived as men's means to prove their maleness, but are respected and valued as biological and cultural reproducers of Mayan cultures, and indigenous men unequivocally eschew Ladino "promiscuity" (Smith 1995). Indisputably, this traditional model of gender

dynamics in the indigenous household is also affected by the increasing dominance of the modern market economy in Guatemala (Bossen 1984; Green 2008). However, their strong roles both in the household and in the community is more resistant to change than is the Ladino males in the face of economic crisis, which might have weakened their economic role (Wolf 1966; Bastos 1999).

In parallel to the series of studies on men as fathers, extensive scholarly attention has been garnered by “feminization of poverty,” or the potential impoverishment among an ever larger number of single mothers in Latin America (Buvinic and Gupta 1997; De Vos and Arias 1998; Marcoux 1998; Chant 2003). However, unlike the increased incidence of poverty among female-headed households elsewhere, recent quantitative evidence from Latin America has emphasized that single mothers are not necessarily the poorest of the poor, and their socioeconomic status is heterogeneous (Fuwa 2000; CEPAL 2001; Quisumbing, Haddad et al. 2001). Furthermore, Latin American scholars claim that female-headship is a new or even emancipatory alternative of family organization and that considering it to be pathological comes from the Eurocentric notion that the nuclear family is the norm. Such bias, they maintain, leads to discriminatory practices in legislation, social policy, and the labor market (Safa 1999; Datta and McIlwaine 2000; Chant 2002). They present the evidence that single mothers are more likely to live in an extended family, to have a smaller number of children, and to be engaged in remunerated jobs, which safeguard them from severe poverty and compensate for the lack of a male partner’s income (González de la Rocha 1999; Safa 1999; Waterberg 1999). Many women and their children are actually better off alone because the absence of male partners enables single mothers to make decisions for themselves (Feijoó 1999) and allows more balanced intra-household resource allocation (Chant 1997; Engle and Breaux 1998; Varley 2001). This is



substantiated by the claim that more women are taking initiative in union dissolution than in the past (Chant 1997; González de la Rocha 1999; Safa 1999).

While there has been a significant amount of both quantitative and qualitative research conducted on male absence from both women's and men's perspectives, father absence as experienced by children in Latin America has not been well investigated. Although some studies have found no or even positive effects of single motherhood on child growth stunting in Guatemala and other Latin American countries (Desai 1992; Engle 1995), the evidence to date is far from being conclusive or sufficient. In particular, no attention has been paid to the role of ethnicity. However, based on the cultural models that describe men's differential attachment to their families by ethnicity, several hypotheses and research questions concerning the role of ethnicity in father absence in children's lives can be generated. From the past research on the lack of machismo among indigenous men and their consequent lower likelihood of un-partnered childbearing as well as union dissolution among indigenous women, it can be predicted that indigenous children are more likely to live with their fathers than Ladino children. Second, since the economic role is described as less important for indigenous than for Ladino fathers, a smaller proportion of the expected negative effect of father absence among indigenous children is attributed to the increased poverty in the father-absent household than to the lack of socio-emotional support from the father whereas a larger proportion of the negative effect of father absence among Ladino children is attributable to poverty than to the lack of a social role model. Similarly, it can also be expected that father absence is more deleterious to indigenous than to Ladino children holding constant the economic resources in the household. In addition, the majority of the evidence against the disadvantages of lone mothers comes from Latin American countries where mestizos are predominant, suggesting that children of non-partnered Ladina

women in Guatemala might not be as disadvantaged as their counterparts in the U.S. and other developed nations. Lastly, although the empirical evidence from the U.S. on the differential effects of father absence by sex has been inconsistent (McLanahan 1985; Sigle-Rushton and McLanahan 2004), socioemotional distance between fathers and daughters suggested in the Latin American literature might diminish the importance of father presence among girls. Thus, it is predicted that the father absence has an even smaller negative effect among Ladina girls.

The present study is guided by these hypotheses and questions on father absence and ethnicity, which have never been tested or assessed previously in a quantitative study. Ideally, the ethnicity of both the father and mother would be considered simultaneously in this examination; however, the data utilized in this study leaves the ethnicity of fathers unidentified. However, considering that Guatemala has one of the highest community-endogamy rates in the world among indigenous people and low incidence of inter-ethnic unions in Guatemala (Smith 1995), it is reasonable to assume that the ethnicity of fathers who are present in the household is the same as the mothers'. To the extent that this assumption is valid, the present research is able to assess how ethnicity might determine the role that the fathers fulfill in their children's well-being when present and, conversely, the impact of their absence from the household. The implications of the lack of the information on fathers' ethnicity are further discussed at the end of this paper.

### **Data and methods**

The data for this study are drawn from the fourth version of the ENSMI, which was conducted by the Guatemalan Ministry of Public Health and Social Assistance (MSPAS). It is a nationally representative sample of 9,155 women and 2,538 men, who were interviewed between April and November 2002. It employed multi-stage cluster sampling based on the census tracts constructed

for the 1994 Census, which define communities for the purpose of the present analysis. First, Guatemala was stratified into its 22 administrative departments; then, a subset of census clusters was randomly selected from each department to proportionally represent each of the seven regions (each of which consists of three to four departments). For the female sample, which is used for this study, one woman aged 15 to 49 was randomly selected from each of 30 randomly selected households per cluster. The final sample had 373 clusters and a response rate of 89% (MSPAS 2003).

The survey included the aforementioned three measures of fathers' involvement in their children's lives and each child's current school enrollment status for the first time since the first version of the ENSMI was carried out in 1987. It recorded whether or not the father of each living child of a female respondent resided with the respondent. If the father of the child under the age of 18 did not live with the respondent, the survey determined whether or not the child's paternity was acknowledged by his/her father at the birth registration and whether or not the child received economic support from his/her non-resident father at the time of the survey.<sup>2</sup> In addition, whether or not children aged 5 to 15 were enrolled in school in the year 2002 was also recorded. These new variables in the 2002 ENSMI allow, for the first time in Guatemala, the unusual and reliable documentation of father absence in children's lives as well as its potential effect on children's school enrollment.

Children were carefully selected by the following criteria. Children whose mothers were currently in either consensual or legal marital unions but did not reside with their male partners were excluded because the reasons for which these parents did not share the household could not be determined from the data. Such separate living arrangements could be due to the fathers' temporary labor migration but also to the process of union dissolution. Children whose mothers

reported being separated from their male partners, divorced, or widowed were all included. The children who did not reside with their mothers at the time of the survey were excluded because the information on these children's living arrangements was not available from the data. Out of 20,646 children in the sample who were at the age of 15 or younger, a total of 18,514 children of 6,135 women constituted the final analytic sample for the first section of the present research<sup>3</sup>, and out of the 10,294 children aged 7<sup>4</sup> to 15, the sub-sample of 7,863 children of 3,702 mothers was used for subsequent, multi-level logistic regression analyses of school enrollment. Further restriction is introduced due to the construction of the children's sample, which is based on the sample where mothers were the sampling units: children whose mothers were over 49 years old are not represented. This results in some bias in the mother's age, however only among older children. Sampling weights were applied throughout the analyses to correct for the children's unequal probabilities of selection.

#### *Variables and modeling strategy*

First, descriptive statistics are presented to gain a general understanding of the prevalence of the absence of fathers in children's households, paternity establishment, and child support payments, particularly focusing on the differences based on the mothers' ethnicity. After the descriptive statistics of school enrollment in Guatemala and of key independent variables are presented by ethnicity, the consequences of fathers' non-co-residence on children's current school enrollment are assessed in multi-level logistic regression models. The dependent variable, children's school enrollment status, is measured as a dichotomous indicator coded 1 when the child is enrolled in school at the time of the survey and 0 otherwise. Father absence in children's households is also a dichotomous indicator, for which children who live away from their biological fathers are coded 1, and those who live with both parents are coded 0. Here, I include the interaction term

between father's non-co-residence and the child's female sex to assess whether a male child is more disadvantaged than a girl by the absence of the same-sex parent in the household.

Subsequently, household economic status is added in the second model in order to examine whether the negative effect of fathers' non-co-residence is explained by the increased poverty in the father-absent households. I expect to see less reduction in the negative effect of father absence among indigenous children because their economic role is hypothesized to be less important than for their Ladino counterparts. A proxy index for household economic status was created based on the possession of assets and housing characteristics and quality in the absence of household income in the 2002 ENSMI. In order to create this index, I considered ownership of assets such as laundry machines, cars, and other items that were likely to represent the household economic standing. Housing characteristics included toilet facilities and availability of electricity. Housing quality was evaluated by using three levels ranging from low to high for the walls, roofs, and floors (Arias and DeVos 1996). I used principal-components analysis to determine the weights for each of these items, characteristics, and levels (Filmer and Pritchett 2001); and the sums of the weighted scores were then rescaled to range from 0 to 1. Lastly, I create two dummy variables for children who live away from their biological fathers who provide child support in the form of cash, regardless the amount, and for children who live away from their fathers who do not pay child support. This third and final model attempts to assess whether the negative effect of fathers' non-co-residence is attenuated by non-resident father's child support payments.

All these nested models include the same set of control variables. The child-level controls are sex, age, and the number of siblings between ages of 5 and 14. The last variable is meant to capture potential competitions among siblings for parental resources. The mother-level controls are Spanish-speaking ability, if she is indigenous, years of schooling, age, labor force

participation, and household arrangements (extended versus nuclear). Spanish speaking is determined by the language spoken at home. It is designed to capture a high degree of assimilation into the Ladino culture and is expected to increase school enrollment. Working mothers, determined by whether they are involved in cash-generating activities in the past 12 months, might have a higher likelihood of enrolling their children in school because a part of their increased cash might be available for the children's welfare. Furthermore, mothers' labor force participation might necessitate that their children stay at school while they work. On the other hand, living in an extended household might remove such a necessity.

Finally, the community characteristics include the proportion of residents in a non-agricultural sector, the proportion of indigenous people, and the proportion of mothers who completed elementary school. The last three variables are constructed based on the aggregation of the same data at the community level. Living in a capital city and in a community whose economy has shifted out of agriculture might decrease the need for children's labor contribution while increasing the observed need for a better education for them. A larger proportion of indigenous residents in a community, which is likely to reflect a similarly larger proportion of indigenous school-age children, might facilitate these children's enrollment because their numerical dominance might counteract their inferior ethnic status in the community, which might otherwise discourage them from attending school. Lastly, well-educated neighbors might serve as role models for socioeconomic success, encouraging even less-educated mothers in enrolling their children.

Comparisons of coefficients without standardization among nested models are problematic for logistic regressions, which are used in this research, because coefficient estimates may change even when the variables added to the model are not correlated with other

variables already in the model. To remedy this, the variance of the latent Y variable is fixed (Mare 2006). A Y\*-standardized coefficient indicates the expected change expressed in the standard deviations of the latent outcome variable for a one-unit change in the given independent variable or the expected difference in the standard deviations between two individuals who differ by one unit on the independent variable.

## **Results**

### *Descriptive analysis*

First, the prevalence of father absence is documented through a series of cross-tabulations. Table 1 shows proportions of children who reside with their fathers by age and ethnicity. Although the data come from a cross-sectional sample, this bivariate analysis is able to demonstrate the potential risk of experiencing father absence in the household throughout the courses of children's lives. As expected, indigenous children<sup>7</sup> are more likely to live with their biological fathers than their Ladino counterparts in every age group. The average proportion of indigenous children with fathers is 92% while it is 85% for the Ladino sample. The difference is statistically significant. The proportions of children with fathers in their households decrease over ages for both ethnic groups probably mainly due to union dissolution of their parents. However, the association between age and co-residence status is statistically significant only for Ladino children, which is probably because of Ladina mothers' higher union instability.

Table 2 presents how children are distributed by household arrangements and ethnicity. In addition to the significant ethnic difference in children's probabilities of living with lone mothers as shown in Table 1, the patterns of household compositions also indicate similarities between indigenous and Ladino groups. First, the household compositions which involve a stepfather are not very common regardless of ethnicity: such arrangements occur to only one

sixth of children of both ethnicities who live away from their biological fathers. Second, when two parents (with both biological fathers and stepfathers) are present, their children are much less likely to share the household with their grandparents regardless of their ethnicities (78% without grandparents versus 13% with grandparents for families with biological fathers and 1.9% without grandparents versus 0.3% with grandparents for families with stepfathers, for both ethnic groups combined) while children of single mothers are at least as likely to live with their grandparents as to live with their mothers alone (5.0% without grandparents versus 5.5% with grandparents, for both ethnic groups combined). This suggests that for single mothers to live with their parents might in fact be an effective strategy against economic deprivation for both ethnic groups.

Subsequently, I look at ethnic differences in non-resident fathers' paternity establishment and monetary child support among the children who do not reside with their biological fathers. According to the first row of Table 3, 59% of all indigenous children who live away from their fathers are legally recognized by them while paternity establishment is reported for 65% of their Ladino counterparts. The 6% difference is not statistically significant. The subsequent row of the same table indicates that indigenous children are less likely to be economically supported by their non-resident fathers than their Ladino counterparts (14% versus 30%). Here, the ethnic difference is statistically significant. The last two rows of Table 3 demonstrate associations between paternity establishment and child support payments. For indigenous children, paternity establishment does not seem to play a major role in economic support payments: the proportion of the children who receive economic support is 11% when the paternity is established and 16% otherwise. There is no statistically significant association between paternity establishment and economic support payments for indigenous children. On the other hand, the proportion of Ladino



children who are economically supported increases from 5% without established paternity to 44% with established paternity. The difference in these figures in the Ladino sample is statistically significant.

In sum, indigenous children are significantly more likely to live with their fathers than Ladino children as expected; however, when they do not live with their biological fathers, they are significantly less likely to receive economic support payments from their non-resident fathers than their Ladino counterparts. In addition, for indigenous children, paternity establishment is less likely to increase the likelihood of receiving economic support payments than for Ladino children.

#### *Fathers' non-co-residence and children's school enrollment status*

I begin the second section by presenting two descriptive statistics. First, the proportions of children who are enrolled in school by their age and ethnicity introduce the readers to the broader context of school enrollment in Guatemala. Second, the observed patterns of school enrollment and other potential socioeconomic determinants of school enrollment by the fathers' co-resident status with their children and ethnicity are explored. Table 4 demonstrates that indigenous children are usually less likely to be enrolled in school than Ladino children; however, the ethnic difference is more substantial among girls particularly at older ages. Only 27% of indigenous girls at the age of 15 are enrolled in school while 68% of their Ladina counterparts attend school.

I find initial support for the negative effect of father absence in the household for the indigenous group as shown in Table 5: a significantly smaller proportion of indigenous children who live away from their fathers are enrolled in school compared to their counterparts in two-biological-parent families. However, father's co-resident status does not seem to have a significant impact on Ladino children's school enrollment. There are several significant

differences in other variables by fathers' co-resident status within each ethnic group. As suggested by the Latin American literature, children who live away from their biological fathers have significantly fewer siblings, their mothers are significantly more likely to be in the labor force, and their households are significantly more likely to be extended rather than nuclear regardless of ethnicity, all of which might counteract the potential disadvantage suffered by the children without fathers in the household. Ladino children in father-absent households are more likely to be found in a modernized community and a community with a higher proportion of women who have graduated from primary school. Similarly to the Ladino sample, indigenous children without fathers are significantly more likely to have well-educated neighbors.

I begin the multivariate analysis by fitting a multi-level logistic regression model to the pooled sample of indigenous and Ladino children. The results of the pooled analysis (not shown) indicates that in addition to the expected significantly lower likelihood that indigenous children are enrolled in school than Ladino children, several interactions between ethnicity and key independent variables, including father's non-co-residence, are statistically significant, suggesting that the effects of these variables on school enrollment operate differentially by ethnicity. Therefore, the analyses are conducted separately for indigenous and Ladino children for the remainder of this section to better identify the different mechanisms by which father absence in the household impacts the outcome, thereby elucidating the ethnic differences in father-child relationships.

The first inquiry is whether or not fathers' non-co-residence in general has a negative effect on children's school enrollment status. The first model is estimated without controlling for household economic status or child support payments. The results are presented in the first column of Table 6 for the indigenous sample and the fourth column of the same table for the

Ladino sample. The results show that holding constant several child, mother, and community characteristics, father absence in the household significantly decreases the likelihood that indigenous children are enrolled in school. A small and insignificant interactive effect between the child's sex and father's non-co-residence for the indigenous sample suggests that living away from fathers has a similarly adverse effect for girls and boys. Father absence in the household also negatively affects school enrollment for Ladinos; however, this significantly negative effect only pertains to the male children as expected. The positive and significant coefficient for the interaction between father's non-co-residence and the child's female sex is nearly as large as the coefficient for father's non-co-residence which pertains to boys. This indicates that the effect of father's non-co-residence for Ladina girls is close to zero. Father absence in the household seems to be only slightly more deleterious for indigenous children than for Ladino male children: the Y-standardized coefficient for father absence for the indigenous boys and girls is -0.573 (without the interaction with female sex) while it is -0.530 for the Ladino male children.<sup>8</sup>

Next, I ask whether the significantly negative effect of father absence in the household can be explained by decreased economic resources. In these second and the subsequent models, the interaction between father's non-co-residence and the child's sex is omitted for the indigenous sample for the sake of parsimony; therefore, the analysis focuses on the indigenous children of both sexes and Ladino male children, for whom a significantly negative effect of fathers' non-co-residence is established in the first model. The coefficients for household economic status are, not surprisingly, extremely large and significant for both of the samples, suggesting that it is one of the key determinants of children's school enrollment regardless of their ethnicity. The presence of this variable does decrease the coefficient for father absence in the household for both ethnic groups, however, less substantially for indigenous children as

hypothesized. The reduction for the indigenous sample is approximately 9% from a coefficient of -0.573 to -0.520 while the coefficient for father absence in Ladino boy's households decreases by 38% from -0.530 to -0.331. This suggests that a relatively smaller fraction of the negative effect of father absence in indigenous households operates through reduced economic resources due to the lack of a male economic provider, and father absence more severely disadvantages indigenous children than Ladino boys when economic status is held constant. This is consistent with the argument that fathers of indigenous children play a more important social, rather than economic, role while the role of Ladino children's fathers is more strongly related to economic factors. In addition, although father absence in both indigenous and Ladino households continues to have a significantly negative effect even after household economic status is held constant, father absence is clearly more deleterious to indigenous children as evidenced by the substantially larger negative coefficient for father absence in the indigenous sample.

Lastly, whether the receipt of child support payments from non-resident fathers attenuates the negative effect of father absence in children's household is examined. Regardless of ethnicity, children who do not live with their father but receive child support payments are no longer significantly less likely to be enrolled in school than their counterparts in two-parent households while their counterparts without child support payments are significantly disadvantaged in school enrollment. However, child support payments seem to have weaker effects for the indigenous children: the coefficient for the indigenous children with economic support is still negative and substantially larger than that for their Ladino male counterparts.

The main results of the other variables are briefly discussed based on this third and final model. Female children are significantly less likely to be enrolled in school for both ethnic groups; however, consistent with the bivariate results, such a negative effect is more substantial

for the indigenous group. While for indigenous children, the number of school-age brothers and sisters does not have any effects on their school enrollment, its large and significantly negative effect for the Ladino sample suggests severe competitions among siblings in Ladino families.

The expected positive effect of indigenous mothers' Spanish-speaking ability turns out to be insignificant. Mothers' education has positive, linear effects for both indigenous and Ladino children. While older Ladino mothers are significantly more likely to have their children in school than younger mothers, having an older mother has a negative, yet insignificant effect among indigenous children. Mothers' labor force participation significantly increases only indigenous children's school enrollment. Having grandparents has no significant effect for both ethnic groups. Lastly, a higher level of educational attainment at the community level has an additional positive effect on school enrolment only among indigenous children at the significant level, and the proportion in a non-agricultural sector of communities unexpectedly and significantly *decreases* only Ladino children's school enrollment.

### **Discussion and conclusion**

This study documents important ethnic differences in the prevalence and consequences of father absence in Guatemala. Bivariate analysis shows that indigenous children are more likely to share the same household with their biological fathers as expected; however, in the fewer cases where indigenous children live away from their fathers, these fathers are less likely to provide child support payments than the fathers of Ladino children, appearing to be less committed to the children's welfare. However, it is highly likely that the absent fathers of indigenous children are also indigenous and poor and are unable to provide economic support, rather than lacking concern for their children. This argument is consistent with the insignificant difference in paternity establishment between indigenous and Ladino children and with the insignificant

association between paternity establishment and child support payments among indigenous children.<sup>9</sup>

Multivariate analyses establish that father absence in the household significantly disadvantages children in their likelihood of school enrollment for both ethnic groups except for Ladina female children, for whom such a negative effect is virtually absent. Consistent with my hypotheses, father absence in the household is more deleterious for indigenous children than Ladino boys when household economic status is controlled, and a smaller proportion of the negative effect of living away from fathers is attributable to the increased poverty in the father-absent household for indigenous children than for Ladino male children. Assuming that fathers belong to the same ethnic group as their children, these findings suggest that the role that indigenous fathers play extends beyond the economic role as seen for Ladino fathers. One potential scenario behind this ethnic difference lies in the greater gender difference in public appearance in the indigenous household. Although Guatemalan patriarchy prescribes that men are public figures and women belong to the domestic sphere regardless of ethnicity (Maynard 1974), the appearance of indigenous women in public arenas is substantially more restricted than that of Ladinass. Indigenous women are expected to protect the Mayan ethnic identity and to avoid contact with Ladino (Smith 1995). This inevitably results in their lack of connection with public institutions because “public” is exclusively a Ladino attribute and their personnel are predominantly Ladinos. The use of community-specific Mayan language and dress is far more common among indigenous women than among men and play an important role not only in demarcating the ethnic boundary but also in helping distance themselves from Ladinos. However, many indigenous men speak Spanish and wear Western clothing (Pebley, Goldman et al. 2005), reflecting substantially decreased barriers to the Ladino culture, and they serve as a critical

connection between the household and the outside world. Therefore, father absence in the indigenous household may mean a loss of a primary contact with schools, leading to the lower likelihood of indigenous children's school enrollment.

On the other hand, Ladina single mothers are likely to face far fewer obstacles approaching schools for their children's enrollment than their indigenous counterparts due to their membership to the dominant ethnic group. Ladina mothers may be the primary contact persons with school officials even when their male partners are present in their households<sup>10</sup>. Therefore, if not constrained by an economic hardship, Ladino mothers are better able to facilitate their children's school enrollment alone than their indigenous counterparts.

Another important finding is that Ladino female children who do not reside with their biological fathers are by no means less likely to be enrolled in school than their counterparts in two-parent households. The significant interaction between child's sex and father absence in the household that persists even before household economic status is controlled further suggests that an economic hardship does not discourage Ladino lone mothers and their daughters from school enrollment. This significant interaction suggests not only that a greater distance between fathers and daughters in the Ladino household suggested in the literature may indeed diminish the importance of the presence of fathers for female children but also that Ladino mothers may favor their same-sex children in the allocation of parental resources in the household.

Regardless of ethnicity, children in father-absent households who receive child support payments are no longer significantly less likely to be enrolled in school compared to their respective counterparts in two-parent households. The larger reduction of the negative effect of father absence by child support payment among Ladino male children seems to be consistent with the argument that the Ladino fathers play a more important economic rather than social role.

However, it is important to bear in mind that child support payments by non-resident fathers may be associated with a level of their involvement with their children (Seltzer, Schaeffer et al. 1989) and the role that these fathers play may not be only economic but also supervisory and authoritative. Assessing the quality of relationships between non-resident fathers and their children can be measured by frequencies of contacts or types of interactions and may help to better identify the mechanisms by which child support payments improve the chance of school enrollment among children in father-absent household. One potential factor that determines the quality of relationships between non-resident fathers and their children is their family structure history such as whether they were born to single mothers or once wedded parents and, in the case of the latter, the length of unions before the dissolution (Sweeney 2007). A father who has been in a union with the mother of his children, especially for a long period of time, is likely to have a strong attachment to the children, thereby maintaining a close tie with them even after the partnership with their mother ends (Buvinic, Valenzuela et al. 1992). In addition, the amount of time since the separation might also be a key determinant of non-resident father's involvement with his children (Seltzer, Schaeffer et al. 1989). On the other hand, a father who has never been in a union with the mother is least likely to have any bond with his children; therefore, the consequences of father absence in the household for these children might be the severest. Future studies should address this potential diversity in family structures.

There are several important issues and limitations that need to be acknowledged in the present research. First, although this study established a significant, negative association between father absence in children's household and their school enrollment status, its ability to establish causality is limited due to a potential selection bias. A portion of this strong association could be attributable to the selective and unobserved characteristics of the women, which prompted them



to stay single and to fail to enroll their children in school. Second, the results are potentially sensitive to the specification of household economic status. The proxy constructed and used for this research is a simple index of household goods and housing quality and may not estimate the full extent of economic resources available not only to spare extra expenses involved with school enrollment but also to relinquish the children's potential contribution as a wage earner. School enrollment might be more responsive to a short-term income fluctuation than to an accumulation of wealth that this proxy is meant to capture. Future research should assess the robustness of the results to other measures of household economic status. Finally, father absence might be more prevalent than this study can unravel due to potential misreporting. For example, single mothers might report themselves to be in unions and paternity of their children to be, incorrectly, recognized by their fathers due to the stigma attached to childbearing outside of unions, union dissolution, and children with unestablished paternity.

Notwithstanding these limitations, the present study makes an important step toward our better understanding of father absence in children's lives and the ethnic differences in family relationships in Guatemala. Additional work should assess the generalizability of these results to other child outcomes as well as to the rest of the Latin American countries.

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**Table 1. Biological fathers' co-resident status by children's age and ethnicity**

Age <sup>1</sup>	Ethnicity		
	Indigenous	Ladina	Full Sample
<1	0.939	0.869	0.896
1-5	0.920	0.850	0.878
6-10	0.917	0.858	0.881
11-15	0.898	0.819	0.873
Total (number of children)	0.916 (8,953)	0.846 (9,561)	0.873 (18,514)

Note: Proportions are weighted. The numbers of children are not weighted.

<sup>1</sup>The Pearson's chi-square test indicates that the association between age and father's co-resident status is statistically significant only for the Ladino group at  $p < .05$ . The overall association between co-resident status and ethnicity is statistically significant at  $p < .01$ .

**Table 2. Household arrangements of children by ethnicity**

Household compositions	Ethnicity		Full Sample
	Indigenous	Ladina	
Two (biological) parents <sup>1</sup> , nuclear <sup>2</sup>	0.778	0.729	0.778
Two (biological) parents, extended <sup>3</sup>	0.138	0.117	0.125
Single mother, nuclear	0.034	0.060	0.050
Single mother, extended	0.038	0.066	0.055
Mother and stepfather <sup>3</sup> , nuclear	0.010	0.025	0.019
Mother and stepfather, extended	0.002	0.004	0.003
Total (Number of children)	1.000 (8,953)	1.000 (9,561)	1.000 (18,514)

Note: Proportions are weighted. The numbers of children are not weighted.

<sup>1</sup> The Pearson's chi-square test indicates that the overall association between the likelihood of living in a two-parent family and ethnicity is statistically significant at  $p < .001$ .

<sup>2</sup> Here the word "nuclear" is defined as a household consisting of only parent(s) and their (her) children, without regard to the presence or absence of the fathers.

<sup>3</sup> The Pearson's chi-square test indicates that the overall association between the likelihood of living in an extended family and ethnicity is not statistically significant at  $p < .05$ .

<sup>4</sup> The Pearson's chi-square test indicates that the overall association between the likelihood of living in a stepfamily and ethnicity is not statistically significant at  $p < .05$ .

**Table 3. Paternity establishment and child support payments for children with non-resident biological fathers<sup>1</sup>**

Dependent variables	Ethnicity		Full Sample
	Indigenous	Ladina	
Children with established paternity <sup>2</sup>	0.586 (365)	0.652 (906)	0.638 (1,271)
Children who receive economic support <sup>3</sup>	0.138 (368)	0.304 (908)	0.268 (1,276)
Children who receive economic support among those with established paternity <sup>4</sup>	0.161 (245)	0.436 (603)	0.382 (848)
Children who receive economic support among those without established paternity <sup>4</sup>	0.106 (120)	0.053 (303)	0.066 (423)

Note: Proportions are weighted. The unweighted total numbers of children, that is, percentage bases, are in parenthesis.

<sup>1</sup> For this section of the study, children whose mothers are widowed are excluded.

<sup>2</sup> The Pearson's chi-square test indicates that the association between paternity establishment and ethnicity is not statistically significant at  $p < .05$ .

For the vast majority of the cases (93% for indigenous and 97% for Ladino children) where paternity is established, paternity acknowledgement was done voluntarily by the biological fathers of the children. The paternity of remaining children (7% for indigenous and 3% for the Ladino sample) is established by court orders or through compulsion by the families of the mothers. These ethnic differences are only marginally significant ( $p < .10$ ). For the cases where children's paternity is not established, 70% of fathers of both ethnic groups combined (there are no significant ethnic differences) did not want to legally recognize the children while 19% of them did not recognize them because the mothers did not want them to.

<sup>3</sup> The Pearson's chi-square test indicates that the association between economic support payments and ethnicity is statistically significant at  $p < .01$ .

<sup>4</sup> The Pearson's chi-square test indicates that the association between economic support payments and paternity establishment is not statistically significant for the indigenous sample but significant for the Ladino sample at  $p < .001$ .



**Table 4. Descriptive statistics for school enrollment by children's age, sex, and ethnicity**

Age	Boy		Girl		Total
	Indigenous	Ladino	Indigenous	Ladino	
7	0.747	0.791	0.680	0.804	0.770
8	0.793**	0.904**	0.677***	0.870***	0.827
9	0.871	0.920	0.821**	0.920**	0.892
10	0.873	0.932	0.831***	0.937***	0.907
11	0.886	0.895	0.783***	0.917***	0.882
12	0.859	0.906	0.766*	0.867*	0.865
13	0.753*	0.859*	0.686**	0.824**	0.800
14	0.640*	0.769*	0.476***	0.722***	0.688
15	0.546*	0.684*	0.270***	0.678***	0.610
Total (Number of Children)	0.798** (1,846)	0.864** (2,293)	0.707*** (1,703)	0.860*** (1,994)	0.825 (7,836)

Note: Proportions are weighted. The numbers of children are not weighted.

The difference between indigenous and Ladino children is statistically significant, respectively, at \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 5. Descriptive statistics of children's current school enrollment status for key independent variables by father's co-resident status and ethnicity**

Variables	Indigenous		Ladino		Total
	Father present	Father absent	Father present	Father absent	
<i>Child's level</i>					
Enrollment	0.764**	0.668**	0.867	0.835	0.825
Number of siblings aged 7-14	3.080***	2.371***	2.729***	2.381***	2.792
<i>Mother and household level</i>					
Household economic status	0.217	0.239	0.448	0.466	0.370
Mother speaks Spanish	0.227	0.227			.227
Mother's education					
0 years	0.671	0.696	0.285	0.270	0.417
1-5 years	0.276	0.224	0.355	0.321	0.322
6+ years	0.053	0.080	0.361	0.409	0.259
Mother's age					
29 years old or younger	0.153	0.150	0.138	0.133	0.143
30 years old or older	0.847	0.850	0.862	0.867	0.857
Mother currently in labor force	0.270***	0.458***	0.316***	0.636***	0.339
Extended family (vs. nuclear)	0.090***	0.304***	0.089***	0.253***	0.113
<i>Community level</i>					
Proportion in non-agricultural sector	0.406	0.477	0.615***	0.731***	0.556
Proportion of indigenous people	0.841	0.759	0.085	0.086	0.346
Proportion with education 6+	0.162*	0.239*	0.431***	0.541***	0.351
Number of Children	3,262	287	3,691	596	7,836

The difference by father's co-resident status within each ethnic group is statistically significant, respectively, at \*p<.05; \*\*p<.01; \*\*\*p<.001.

**Table 6. Multi-level logistic regression of children's current school enrollment status on key independent variables (N<sup>indigenous</sup>=3,549, N<sup>Ladino</sup>=4,287)**

Independent variables	Indigenous			Ladino		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<i>Child's characteristics</i>						
Father's non-co-residence	-0.689*** <sup>1</sup> (0.171)	-0.520*** (0.141)		-0.530*** (0.151)	-0.331* (0.149)	
Interaction with girl	0.232 (0.204)			0.463* (0.188)	0.487* (0.191)	
Father's non-co-residence with child support payments			-0.443 (0.353)			0.119 (0.415)
Interaction with girl						0.368 (0.545)
Father's non-co-residence without child support payments			-0.529* (0.148)			-0.400* (0.162)
Interaction with girl						0.514* (0.205)
Girl	-0.534*** (0.063)	-0.514*** (0.060)	-0.514*** (0.060)	-0.364*** (0.066)	-0.366*** (0.066)	-0.366*** (0.066)
Number of siblings aged 7-14	-0.043 (0.039)	-0.030 (0.039)	-0.030 (0.039)	-0.181*** (0.039)	-0.121** (0.038)	-0.121** (0.037)
<i>Mother's and household characteristics</i>						
Household economic status		1.431*** (0.378)	1.428*** (0.376)		2.332*** (0.160)	2.332*** (0.163)
Mother speaks Spanish	0.184 (0.111)	0.130 (0.111)	0.130 (0.111)			
Mother's education [0 years omitted]						
1-5 years	0.221* (0.081)	0.183* (0.081)	0.183* (0.081)	0.208** (0.061)	0.174** (0.056)	0.174** (0.056)
6+ years	0.820** (0.227)	0.682** (0.239)	0.683** (0.239)	0.812*** (0.109)	0.620*** (0.107)	0.623*** (0.106)
Mother's age [29 years or younger omitted]						
30 years or older	-0.139 (0.105)	-0.168 (0.102)	-0.168 (0.103)	0.315 (0.104)	0.225* (0.097)	0.221* (0.098)
Mother currently in labor force	0.184* (0.074)	0.159* (0.073)	0.160* (0.073)	0.201 (0.073)	0.133 (0.068)	0.133 (0.068)
Extended family (vs. nuclear)	-0.032 (0.112)	-0.048 (0.110)	-0.048 (0.110)	0.115 (0.120)	0.060 (0.109)	0.057 (0.109)
<i>Community's characteristics</i>						
Proportion in non-agricultural sector	0.036 (0.160)	-0.097 (0.170)	-0.098 (0.170)	0.179 (0.156)	-0.304* (0.146)	-0.313** (0.146)
Proportion of indigenous people	0.248 (0.183)	0.279 (0.175)	0.277 (0.175)	0.195 (0.198)	0.010 (0.171)	0.012 (0.172)
Proportion of mothers with elementary education	1.555*** (0.309)	1.159*** (0.332)	1.428*** (0.376)	0.943 (0.203)	0.033 (0.186)	0.026 (0.189)

$\sigma$ (residual variance)	0.807*** (0.037)	0.769*** (0.040)	0.769*** (0.040)	0.680*** (0.042)	0.515*** (0.040)	0.519*** (0.040)
$\rho$ (intra-mother correlation) <sup>2</sup>	0.278	0.269	0.269	0.245	0.197	0.199

Note: All coefficients are Y\*-standardized using the formula:  $\beta_i = b_i / \sqrt{\text{var}(Y^*)}$ . Standard errors are in parentheses. All models also include nine dummies for child's age.

<sup>†</sup>p<.10; \*p<.05; \*\*p<.01; \*\*\*p<.001.

<sup>1</sup> The Y\*-standardized coefficient without the interaction between father absence and a child's female sex is -0.573 with a standard error of 0.143 (p<.001).

<sup>2</sup> Intra-mother correlation was calculated using the formula:  $\rho = \sigma / (\sigma + \pi^2/3)$ . This represents the degree to which children of the same mother are similar due to their shared unobserved characteristics.

## Notes

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<sup>1</sup> Denial of child support payments is considered a crime, and family members who fail to support their dependents can be sent to prison for up to two years, according to the nation's criminal law. In addition, child support eligibility does not depend on the "legitimacy" of the children, making no distinction by marital status of their mothers Werthemer, J. W. (2006). "Gloria's story: Adulterous concubinage and the law in twentieth-century Guatemala." *Low and History Review* 24(2): 375-422..

<sup>2</sup> Although the men's sample contains the same information on the children except their school enrollment status, it is not used for the present study because its size is much smaller than the women's sample, and the men appear to substantially underreport children who do not reside with them. Such underreporting is probably due to the fear of admitting their paternity connections, which might incur legal enforcement of fatherly duties including child support payments Marsiglio, W., P. Amato, et al. (2000). "Scholarship on fatherhood in the 1990s and beyond." *Journal of Marriage and the Family* 62(4): 1173-1191..

<sup>3</sup> Eight per cent (1,627) of the children are excluded because they had father who lived away from their mothers and 3% (556) are excluded because they lived away from their mothers themselves.

<sup>4</sup> Because the normative age to begin primary education is 7 years old in Guatemala, children who are at least 7 years old on January 1, 2002 when the school year started were considered for this study.

<sup>7</sup> Children whose fathers are Ladinos are likely to be considered "Ladinos" even when their mothers are indigenous because Ladinos are, by definition, mixed race individuals. However, since the ethnicity of the fathers are not identified in the data, I refer to the children of indigenous mothers as indigenous children and to the children of Ladina mothers as Ladino children for the sake of convenience in this study.

<sup>8</sup> The odds of school enrollment is 43% smaller for indigenous children who live away from their fathers and 41% smaller for Ladino children who similarly live away from their fathers, compared to their respective counterparts in two-parent households.

<sup>9</sup> An alternative hypothesis is that the lower proportion of indigenous children who receive child support payments from their non-resident, biological fathers might reflect the extent to which these fathers are Ladinos. The sexual relations between Ladino men and indigenous women might have been characterized by unequal power due to the ethnic hierarchy in Guatemala and may have taken a form of concubinage or sexual coercion, and Ladino fathers might be particularly unwilling to commit to the welfare of the children whose mothers are indigenous. The proportion of children whose paternity is established by court orders is slightly larger among the indigenous than among Ladino group at a marginally significant level, which is consistent with this argument. However, in the absence of solid data, this hypothesis cannot be tested.

<sup>10</sup> According to the auxiliary analysis, when both parents are present, the decision regarding which school to enroll the children is made by fathers alone for 54% of indigenous children, by mothers alone for 15%, and by both for 31%, while the corresponding figures for Ladino children are 33% by fathers alone, 20% by mothers alone, and 47% by both, confirming such an ethnic difference.