Decoupling Parental Absences from Remittances in Economic Migration: The Case of Educational Attainment in Guatemalan Migrant-Sending Households

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Abstract

One component in the debate over whether economic migration is ultimately beneficial to migrant-sending communities is its influence on the educational attainment of children. The picture is unclear because relevant research to date has either analyzed parental absences and remittances - the primary components of economic migration - in tandem or individually, without discussing the other. We address this deficiency by employing instrumental variables to decouple the endogeneity of parental absences from remittances on measures of educational attainment. Specifically, we analyze 2000 Guatemala Living Standards Measurement Study data to determine their influence on student attendance and dropout rates. Results indicate that parental absences are negatively related to student attendance, but the magnitude of their association is small. Remittances, in contrast, are correlated with a reduction in both student absences and dropout rates. Our results further indicate that minimal remittances are required to ameliorate the harmful influence of parental absences on student attendance.

1 Introduction

A lively debate has ensued in the literature over last three decades concerning the value of international migration and concomitant remittance transfers to emergent nation development (Reichert 1981; Durand, Parrado and Massey 1996). One aspect of this debate addresses the influence of economic migration on left-behind children's education outcomes. The vast majority of this research has shown beneficial associations between economic migration and school attendance, performance, graduation rates, and reduced dropout (Yang 2008; Kandel and Kao 2001; Acosta 2011; Edwards and Ureta 2003; Lu and Treiman 2007; Adams 2005). However, a growing body of largely qualitative research has addressed the more harmful aspects of parental absences on these education metrics (e.g., left-behind child resentment, migrant infidelity and/or abandonment of the family or the need to replace an absent household breadwinner due to migration, see Moran-Taylor 2008; Dreby 2006; Schmalzbauer 2008; Suarez-Orozco, Todorova and Louie 2002; Smith 2005; Creighton, Park and Teruel 2009). A deficiency in this type research is a clear separation (decoupling) of the likely harmful influences of parental absence from the beneficial effects of remittance on measures of educational attainment. This investigation strives to address this research need by employing instrumental variables to account for the endogeneity of parental absences due to migration from remittances to form a better understanding of the overall influence of economic migration on children's education outcomes.

We are aware of only a few investigations (none in education) that have used instrumental variables to systematically separate the differential effects of migration events from the flow of remittances on outcomes of interest, exceptions occur in the agricultural change literature (e.g. Damon 2010; Taylor, Rozelle and de Brauw 2003). This separation is important because the often beneficial aspects of remittance transfers may be negatively countered by the long-term absences of household members. Children's educational attainment provides a prime example of this dichotomy but it also applies to other phenomena including health outcomes, local development, land use practices, and intra-household dynamics. Taking care to account for these often opposing forces will allow migration researchers to more accurately model their influence on variables of research interest in the future.

We apply our econometric analytic strategy to the Guatemala/US migration context. Guatemalan migration to the US is a relatively recent phenomenon. During Guatemala's thirty-six year civil war that end in 1996, numerous refugees fled the country to take up residence in neighbouring Mexico while a much smaller number continued on to the US (Morrison 1993; Moran-Taylor 2008). Guatemalans are now primarily using international migration as a means to alleviate poverty, to enhance social status, and to provide better opportunities for themselves and their children (Adams and Page 2005; Taylor, Moran-Taylor and Ruiz 2006). To put Guatemalan emigration into perspective, approximately 1.4 million (11 per cent) Guatemalans were living abroad in 2008-97 per cent in the US (IOM 2009). This contrasts with just under 500,000 living outside their native country in 1996-the year the peace accords were signed. Furthermore, remittance transfers made nearly a seven-fold jump from

US$ 596 million to US$ 4 billion between 2000 and 2009-representing 10.8 per cent of Guatemala's GDP for that year (Mohapatra, Ratha and Silwal 2011).

2 Empirical Strategy

In order to estimate the effects of parental migration and household remittances on child schooling persistence, we first estimate a basic ordinary least squares (OLS) regression of the following form:

$$Y = \beta_0 + \beta_1 M + \beta_2 R + \epsilon X, \tag{1}$$

where Y is a measure of child schooling persistence, which we define as dropout status and weeks absent from school in the past year, X is a matrix of child, parental and community control variables, M measures international migration status in the past year and R measures international remittances received by the household in the past year.

The effects estimated from the above model are likely biased due to individual selection into migration and remittance sending. We minimize endogeneity by controlling for observed covariates X that correlate with child schooling persistence and the decision to migrate and send remittances. However, there are likely unobservable characteristics, such as parental concern for child well-being, that cannot be controlled for given the available data.

To control for endogeneity, we estimate an instrumental variables model using two-stage least squares regression. We postulate that migration M is a function of migration networks MN, or contact with individuals who have previously migrated. Previous literature has shown that migration networks significantly influence migration behavior (Carrington, Detragiache, and Vishnawath 1996; Taylor et al. 1996). Members of a community who have previously migrated lower the costs of out-migration by sharing information about travel, process and jobs in other areas. Additionally, the more migrants in a community signals a higher success rate, further motivating those who have not migrated to consider leaving their communities to seek opportunities elsewhere. We operationalize migration networks as the percent of households in the municipality that contained an international migrant in the past year.

We instrument the endogenous remittance sending variable R using a community's remittance sending history RH. Since previous literature has shown that a migrant's decision to remit is influenced by community norms (Taylor, Rozelle and De Brauw 2003; Taylor and Martin 2001; VanWey, Tucker and McConnell 2005), there is a higher likelihood of a migrant sending remittances given exposure to a history of remittance sending in his local neighborhood. The exposure can come in a number of forms, including the construction of remittance-financed homes in the community, visible improvements in neighbors' houses and the spread of information concerning the process and benefits of receiving remittances. Remittance-sending history is likely not directly correlated with schooling persistence. However, one potential concern is that remit-

tance spending may provide multiplier effects within the community or be directly used to improve local infrastructure (Lowell and de la Garza 2000). These improvements may then have direct or indirect effects on schooling quality, which then has an impact on a child's attendance and dropout status. However, scholars suggest that remittances are treated differently from other sources of income and are often saved rather than spent. We operationalize remittance-sending history as the average amount of remittances received by a household within a municipality in the past year.

For the two instrumental variables, our claim is that conditional on the set of child, parental and community characteristics included in our specification, the unobserved components are uncorrelated with these instruments. The first stage regresses each endogenous variable with both instruments and the control variables.

$$M = \sigma_0 + \sigma_1 MN + \sigma_2 RH + \sigma_3 X \tag{2}$$
$$R = \alpha_0 + \alpha_1 RH + \alpha_2 MN + \alpha_3 X \tag{3}$$

The second stage regresses the outcomes of interest on the predicted values of M and R, $\widehat{M}$ and $\widehat{R}$, respectively, obtained from equations (2) and (3), yielding the following equation:

$$Y = \beta_0 + \beta_1 \widehat{M} + \beta_2 \widehat{R} + \epsilon, \tag{4}$$

The presence of arguably exogenous measures of migration and remittances in the estimating equation parses out the effects of one phenomenon while controlling for the other. The results are weighted to take into account the sampling frame of the study.

3 Data

Data used in our study are from the Guatemala Encuesta Nacional de Condiciones de Vida (ENCOVI) 2000 Survey, a national household survey conducted by the Instituto Nacional de Estadistica. The ENCOVI followed a two-stage stratified cluster sampling design that takes into account regional affiliation and urbanicity. The survey included 7,276 households representative both at the national level and for urban and rural areas. The survey collected information on a variety of topics, including household expenditures, financial assets and living conditions. Our analytic sample contains children ages 7-18 enrolled in school in the past year who have information on parental migration and receipt of household remittances.

Our two outcomes variables are dropout status and number of weeks absent from school. Dropout status is an indicator variable assigning a value of one to a child dropping out in the past year and zero otherwise. The attendance variable measures the number of weeks not attending school in the past year for a child who is enrolled but did not drop out of school.

The remittances variable R assigns a value of one to a child whose household re-

ceived international remittances in the past year and zero otherwise. Migration M is measured in a number of ways. First, we construct an indicator variable assigning a value of one to a child whose father or mother migrated internationally in the past year. Since the effect might differ by parent, we construct two additional indicator variables measuring father and mother international migration separately. Next, we measure the number of months a child's parents lived permanently outside of Guatemala in the past year, first for both parents combined and then for each parent separately.

We control for a variety of child, parental and community characteristics in the analysis that we believe are correlated both with parental migration and household remittance sending and child dropout status and attendance. These variables include father and mother's education, which we code into three categories: no education, primary and secondary and above. Parental ethnicity indicates whether the child has at least one parent that is non-indigenous or not. We also control for region (metro, north, northeast, northwest, south, southeast, southwest, central and Peten), urbanicity (urban and rural), a child's native language (Indigenous, Spanish and other) and other spoken language (Indigenous, Spanish, other and none), gender, age, school type (private or public). Following the methodology described in Filmer and Pritchett (2001), McKenzie (2005) and Filmer (2012), principal components analysis was used to create a household wealth index. Specifically, 39 variables representing three broad categories, household size and construction materials (e.g. number of rooms, roof, wall and floor construction materials), access to utilities and infrastructure (e.g. electricity, sewage, telephone service), and ownership of durable goods (e.g. automobile, cell phone, computer, oven, refrigerator, stove, and television) were used in the creation of this index.

4 Results

Tables 1 and 2 provide results from the basic OLS model specified in equation 1. Column 1 regresses the outcome, dropout status in Table 1 and number of weeks absent in Table 2, on international household remittances and an indicator of whether either parent migrated internationally. Columns 2 and 3 replace the parental migrant indicator with a father or mother specific indicator. Rather than measuring migration as an either-or occurrence, the outcome may depend on the number of months a parent is away. Column 4 shows the effects of the number of total months both parents are away due to international migration, while columns 5 and 6 separate months by father and mother, respectively.

We find that international household remittances received in the past year have no effect on whether or not a child drops out or number of weeks a child is absent from school. These effects are consistent across all measures of parental migration.

We find that all migration measures have no statistically significant effects on dropout status except for whether the mother migrates. If a mother migrates internationally, it increases the probability her child drops out by two percentage points. We also find that parental migration, for both the mother and the father, and the

number of months a mother is away increases the time a child is absent from school.

Results from Tables 1 and 2 may be biased due to the presence of selection and endogeneity in parental migration and remittance sending decisions. We use the IV strategy described in section three to minimize these problems. The results of these analyses are shown in Tables 3 and 4. The second panels of these tables, labeled first stage results, provide the coefficients and standard errors for the instruments, the average remittances received per household in a municipality and the percent of households with a international migrant, in the first stage regressions. These results show that the instruments are significantly and positively correlated with the endogenous variables. Larger migration networks and exposure to remittance receiving households increase the probability of future migration and remittance sending as predicted.

The IV results provide a different story from the one conveyed by the OLS results. First, while the OLS results show that international household remittances decrease only the number of weeks absent, the IV results show that remittances decrease both number of weeks absent and the probability of dropping out. Second, the IV results show that migration, whether measured by occurrence or number of months and by father, mother or either parent, has no effect on dropout status. Lastly, we find that migration has an effect on the number of weeks absent from school, but this effect is only through the father.

5 Conclusion

A key contribution of this analysis is that we are able to estimate the separate effects of parental migration and household remittances. In other words, our strategy allows us to decouple these two intertwined processes. While regular OLS models using observational data typically fail to separate migration from remittances and vice versa due to the selection and endogeneity issues that make it difficult to disentangle these two phenomena, an IV analysis allows us to capture clean sources of variation in migration and remittances. The results from the OLS models indicate that remittances have no effect on a child's schooling persistence while migration does. The migration of the father or mother and the number of months the mother is away increases the number of weeks absent from school while the migration of the mother increases dropout probability. Based on these results we would conclude that parental migration is pivotal and that remittances have no importance. However, the IV results show that although migration has an effect on child schooling persistence, it is small relative to the effects of remittances. Based on these results we would conclude that the effects of parental absence due to migration can be counteracted with the receipt of remittances from abroad.

6 References

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7 Tables

Table 1: The effects of international remittances and migration on dropping out in the past year: Regular OLS Model

	(1)	(2)	(3)	(4)	(5)	(6)
Father's Education: Primary	-0.288	-0.276	-0.272	-0.265	-0.270	-0.292
	(0.267)	(0.271)	(0.304)	(0.307)	(0.304)	(0.271)
Father's Education: Secondary	-0.260	-0.246	-0.267	-0.256	-0.270	-0.248
	(0.328)	(0.330)	(0.373)	(0.373)	(0.373)	(0.328)
Mother's Education: Primary	0.145	0.146	0.070	0.065	0.067	0.142
	(0.312)	(0.318)	(0.356)	(0.362)	(0.356)	(0.316)
Mother's Education: Secondary	-0.190	-0.193	-0.024	-0.071	-0.026	-0.215
	(0.337)	(0.340)	(0.397)	(0.390)	(0.397)	(0.338)
North	0.131	0.211	-0.009	0.079	-0.007	0.184
	(0.674)	(0.663)	(0.703)	(0.693)	(0.703)	(0.664)
Northeast	-0.508	-0.445	-0.428	-0.356	-0.428	-0.459
	(0.607)	(0.604)	(0.648)	(0.647)	(0.648)	(0.605)
Southeast	-1.180**	-1.159**	-1.244**	-1.216**	-1.245**	-1.163**
	(0.502)	(0.499)	(0.552)	(0.551)	(0.552)	(0.498)
Central	-0.726	-0.678	-0.962*	-0.905	-0.962*	-0.688
	(0.492)	(0.489)	(0.561)	(0.556)	(0.561)	(0.488)
Southwest	-1.887**	-1.891**	-1.866**	-1.834**	-1.867**	-1.806**
	(0.578)	(0.588)	(0.611)	(0.612)	(0.612)	(0.562)
Northwest	-1.094*	-1.037*	-1.398**	-1.370**	-1.399**	-1.048*
	(0.584)	(0.579)	(0.661)	(0.664)	(0.661)	(0.578)
Peten	-1.662**	-1.619**	-1.750**	-1.686**	-1.750**	-1.621**
	(0.590)	(0.585)	(0.629)	(0.627)	(0.629)	(0.585)
Rural	0.585*	0.563*	0.492	0.449	0.493	0.559*
	(0.338)	(0.337)	(0.369)	(0.367)	(0.369)	(0.333)
Parental Ethnicity:	0.058	0.050	0.152	0.161	0.153	0.074
Non-indigenous	(0.372)	(0.374)	(0.417)	(0.417)	(0.417)	(0.370)
Female	-0.113	-0.151	-0.107	-0.140	-0.107	-0.140
	(0.146)	(0.146)	(0.157)	(0.157)	(0.158)	(0.144)
Child's Primary Language:	-0.083	-0.004	-0.176	-0.113	-0.173	-0.049
Spanish	(0.494)	(0.498)	(0.543)	(0.546)	(0.543)	(0.497)
Child's Primary Language:	3.256*	3.346*	3.354	3.429*	3.358	3.272*
Other	(1.830)	(1.836)	(2.081)	(2.056)	(2.082)	(1.802)
Child's Other Language:	1.128	1.203	1.184	1.230	1.187	1.158
Spanish	(0.844)	(0.839)	(0.875)	(0.870)	(0.875)	(0.840)
Child's Other Language:	1.390*	1.046	1.489*	1.602*	1.490*	1.476*
Other	(0.780)	(0.843)	(0.834)	(0.827)	(0.835)	(0.774)
Child's Other Language:	0.586	0.615	0.433	0.433	0.434	0.575
None	(0.701)	(0.700)	(0.719)	(0.713)	(0.719)	(0.698)
Private school	-0.252	-0.266	-0.244	-0.246	-0.242	-0.250
	(0.302)	(0.310)	(0.358)	(0.364)	(0.358)	(0.312)
Age	0.027	0.030	0.031	0.034	0.031	0.029

	(0.030)	(0.031)	(0.033)	(0.033)	(0.033)	(0.031)
Household wealth index	-0.026	-0.030	-0.012	-0.015	-0.012	-0.028
	(0.080)	(0.082)	(0.077)	(0.079)	(0.077)	(0.081)
Household received	-0.005	0.023	-0.196	-0.172	-0.194	0.004
international remittances	(0.367)	(0.372)	(0.565)	(0.578)	(0.566)	(0.376)
Parent migrated internationally	0.437					
	(0.687)					
Father migrated internationally			-1.901*			
			(1.054)			
Mother migrated internationally		1.841**				
		(0.780)				
Total months parents migrated				-0.180		
				(0.143)		
Total months father migrated					-0.718	
					(0.441)	
Total months mother migrated						0.134
						(0.163)
Observations	7268	7122	6023	5877	6023	7122

Standard errors in parentheses. All values weighted. Source: ENCOVI 2000
* $p < 0.10$, ** $p < 0.05$

Table 2: The effects of international remittances and migration on weeks absent in the past year: Regular OLS Model

	(1)	(2)	(3)	(4)	(5)	(6)
Father's Education: Primary	-0.109**	-0.104**	-0.135**	-0.135**	-0.139**	-0.109**
	(0.046)	(0.047)	(0.052)	(0.052)	(0.051)	(0.046)
Father's Education: Secondary	-0.153**	-0.152**	-0.189**	-0.194**	-0.189**	-0.155**
	(0.065)	(0.066)	(0.073)	(0.074)	(0.073)	(0.066)
Mother's Education: Primary	-0.002	-0.005	0.006	0.003	0.003	-0.005
	(0.034)	(0.035)	(0.037)	(0.038)	(0.037)	(0.035)
Mother's Education: Secondary	0.254**	0.255**	0.324**	0.329**	0.326**	0.254**
	(0.092)	(0.093)	(0.105)	(0.107)	(0.104)	(0.093)
North	0.048	0.054	0.043	0.044	0.029	0.049
	(0.112)	(0.114)	(0.116)	(0.118)	(0.117)	(0.114)
Northeast	-0.062	-0.068	-0.073	-0.079	-0.079	-0.069
	(0.082)	(0.083)	(0.089)	(0.091)	(0.089)	(0.083)
Southeast	-0.070	-0.076	-0.069	-0.075	-0.075	-0.077
	(0.079)	(0.080)	(0.081)	(0.081)	(0.081)	(0.080)
Central	-0.020	-0.024	-0.050	-0.055	-0.056	-0.024
	(0.091)	(0.092)	(0.092)	(0.093)	(0.092)	(0.092)
Southwest	-0.121*	-0.123*	-0.129*	-0.124*	-0.122*	-0.118*
	(0.070)	(0.070)	(0.071)	(0.072)	(0.072)	(0.071)
Northwest	-0.315**	-0.311**	-0.336**	-0.339**	-0.344**	-0.313**
	(0.077)	(0.077)	(0.078)	(0.078)	(0.079)	(0.077)
Peten	-0.077	-0.094	-0.076	-0.096	-0.085	-0.095
	(0.093)	(0.094)	(0.099)	(0.100)	(0.099)	(0.094)
Rural	0.024	0.028	0.034	0.037	0.040	0.028

	(0.038)	(0.038)	(0.040)	(0.041)	(0.041)	(0.038)
Parental Ethnicity:	-0.008	-0.008	-0.029	-0.027	-0.026	-0.006
Non-indigenous	(0.056)	(0.057)	(0.059)	(0.060)	(0.059)	(0.057)
Female	-0.035	-0.041	-0.027	-0.033	-0.025	-0.040
	(0.026)	(0.027)	(0.027)	(0.028)	(0.027)	(0.027)
Child's Primary Language:	-0.100	-0.102	-0.115	-0.131	-0.125	-0.110
Spanish	(0.097)	(0.098)	(0.104)	(0.106)	(0.106)	(0.100)
Child's Primary Language:	-0.277	-0.279	-0.409**	-0.430**	-0.422**	-0.287
Other	(0.179)	(0.182)	(0.117)	(0.120)	(0.118)	(0.184)
Child's Other Language:	-0.165	-0.171	-0.156	-0.169	-0.159	-0.179
Spanish	(0.130)	(0.132)	(0.133)	(0.135)	(0.134)	(0.132)
Child's Other Language:	0.329	0.320	0.058	0.037	0.053	0.336
Other	(0.424)	(0.452)	(0.169)	(0.176)	(0.170)	(0.450)
Child's Other Language:	-0.005	-0.003	0.017	0.017	0.009	-0.007
None	(0.110)	(0.111)	(0.111)	(0.112)	(0.111)	(0.111)
Private school	-0.014	-0.009	-0.022	-0.016	-0.022	-0.008
	(0.052)	(0.053)	(0.057)	(0.058)	(0.057)	(0.053)
Age	-0.000	-0.002	0.002	0.001	0.002	-0.002
	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)
Household wealth index	0.018*	0.018*	0.021**	0.021**	0.021**	0.019*
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Household received	0.058	0.061	0.089	0.093	0.090	0.060
international remittances	(0.059)	(0.060)	(0.087)	(0.092)	(0.087)	(0.060)
Parent migrated internationally	0.240**					
	(0.089)					
Father migrated internationally			0.218**			
			(0.093)			
Mother migrated internationally		0.551**				
		(0.124)				
Total months parents migrated				0.012		
				(0.011)		
Total months father migrated					0.006	
					(0.015)	
Total months mother migrated						0.081**
						(0.035)
Observations	6954	6813	5757	5616	5757	6813
R^2	0.025	0.027	0.035	0.034	0.033	0.025

Standard errors in parentheses. All values are weighted. Source: ENCOVI 2000
* $p < 0.10$, ** $p < 0.05$

Table 3: The effects of international remittances and migration on dropping out in the past year: IV Model

	(1)	(2)	(3)	(4)	(5)	(6)
Father's Education: Primary	-0.014	-0.015	-0.016	-0.016	-0.015	-0.014
	(0.013)	(0.016)	(0.014)	(0.017)	(0.016)	(0.014)
Father's Education: Secondary	-0.019	-0.022	-0.020	-0.021	-0.022	-0.019
	(0.017)	(0.021)	(0.017)	(0.021)	(0.021)	(0.017)

Mother's Education: Primary	0.005	-0.001	0.004	-0.003	-0.001	0.004
	(0.014)	(0.016)	(0.014)	(0.017)	(0.017)	(0.015)
Mother's Education: Secondary	-0.012	-0.013	-0.016	-0.017	-0.013	-0.015
	(0.013)	(0.018)	(0.013)	(0.017)	(0.017)	(0.013)
North	0.039	0.039	0.041	0.043	0.039	0.042
	(0.069)	(0.075)	(0.069)	(0.076)	(0.075)	(0.069)
Northeast	-0.012	-0.003	-0.009	-0.001	-0.004	-0.009
	(0.039)	(0.050)	(0.040)	(0.050)	(0.050)	(0.040)
Southeast	-0.045*	-0.049	-0.044*	-0.050	-0.050	-0.043*
	(0.026)	(0.032)	(0.026)	(0.032)	(0.032)	(0.026)
Central	-0.031	-0.042	-0.029	-0.040	-0.043	-0.028
	(0.028)	(0.034)	(0.028)	(0.034)	(0.034)	(0.028)
Southwest	-0.057**	-0.066**	-0.053**	-0.066**	-0.067**	-0.053**
	(0.027)	(0.032)	(0.027)	(0.032)	(0.032)	(0.027)
Northwest	-0.033	-0.045	-0.032	-0.044	-0.046	-0.032
	(0.032)	(0.039)	(0.032)	(0.039)	(0.039)	(0.032)
Peten	-0.062**	-0.075**	-0.059**	-0.073**	-0.075**	-0.059**
	(0.027)	(0.033)	(0.027)	(0.033)	(0.033)	(0.027)
Rural	0.026*	0.022	0.024	0.022	0.023	0.024
	(0.015)	(0.018)	(0.015)	(0.019)	(0.019)	(0.015)
Parental Ethnicity:	0.004	0.008	0.006	0.008	0.008	0.006
Non-indigenous	(0.013)	(0.015)	(0.013)	(0.015)	(0.015)	(0.013)
Female	-0.003	-0.001	-0.003	-0.003	-0.002	-0.003
	(0.007)	(0.008)	(0.007)	(0.008)	(0.008)	(0.007)
Child's Primary Language:	0.000	0.008	-0.002	0.012	0.008	0.001
Spanish	(0.024)	(0.028)	(0.024)	(0.028)	(0.028)	(0.024)
Child's Primary Language:	0.346	0.421	0.344	0.426	0.422	0.346
Other	(0.289)	(0.333)	(0.289)	(0.333)	(0.333)	(0.289)
Child's Other Language:	0.063	0.078	0.063	0.081*	0.078	0.066
Spanish	(0.041)	(0.048)	(0.041)	(0.048)	(0.048)	(0.042)
Child's Other Language:	0.077	0.097	0.110	0.100	0.097	0.085
Other	(0.066)	(0.088)	(0.090)	(0.095)	(0.088)	(0.070)
Child's Other Language:	0.027	0.029	0.027	0.030	0.029	0.027
None	(0.022)	(0.025)	(0.022)	(0.025)	(0.025)	(0.022)
Private school	-0.008	-0.003	-0.008	-0.004	-0.003	-0.009
	(0.012)	(0.016)	(0.012)	(0.016)	(0.016)	(0.012)
Age	0.002	0.003	0.002	0.003	0.003	0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Household wealth index	-0.003	-0.003	-0.004	-0.003	-0.003	-0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Household received	-0.145**	-0.257**	-0.154**	-0.258**	-0.248**	-0.150**
international remittances	(0.067)	(0.115)	(0.070)	(0.121)	(0.115)	(0.069)
Parent migrated internationally	-0.063					
	(0.040)					
Father migrated internationally		-0.043				
		(0.046)				
Mother migrated internationally			-0.276			
			(0.199)			

Total months parents migrated				-0.008		
				(0.012)		
Total months father migrated					-0.013	
					(0.014)	
Total months mother migrated						-0.071
						(0.059)
First-stage results						
Average international remittances per	0.880**	0.914**	0.177**	3.813**	3.123**	0.690*
household in municipality in 2000	(0.097)	(0.099)	(0.065)	(1.049)	(0.640)	(0.382)
Percent of households with	0.001**	0.001**	0.001**	0.001**	0.001**	0.001**
international migrants in 2000	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	7268	6023	7122	5877	6023	7122

Standard errors in parentheses. All values are weighted: Source: ENCOVI 2000
* $p < 0.10$, ** $p < 0.05$

Table 4: The effects of international remittances and migration on weeks absent in the past year: IV Model

	(1)	(2)	(3)	(4)	(5)	(6)
Father's Education: Primary	-0.103**	-0.134**	-0.086*	-0.145**	-0.145**	-0.108**
	(0.047)	(0.053)	(0.051)	(0.054)	(0.053)	(0.051)
Father's Education: Secondary	-0.182**	-0.224**	-0.165**	-0.230**	-0.225**	-0.179**
	(0.068)	(0.078)	(0.071)	(0.081)	(0.081)	(0.071)
Mother's Education: Primary	0.002	-0.001	-0.002	-0.005	0.003	0.004
	(0.034)	(0.040)	(0.035)	(0.042)	(0.041)	(0.035)
Mother's Education: Secondary	0.228**	0.277**	0.240**	0.267**	0.269**	0.236**
	(0.096)	(0.111)	(0.097)	(0.116)	(0.114)	(0.096)
North	0.076	0.087	0.089	0.098	0.093	0.080
	(0.112)	(0.117)	(0.115)	(0.120)	(0.118)	(0.114)
Northeast	-0.011	-0.014	-0.025	-0.018	-0.002	-0.027
	(0.090)	(0.100)	(0.091)	(0.104)	(0.104)	(0.091)
Southeast	-0.029	-0.022	-0.047	-0.022	-0.010	-0.048
	(0.084)	(0.088)	(0.084)	(0.091)	(0.092)	(0.084)
Central	0.002	-0.025	-0.005	-0.024	-0.020	-0.005
	(0.099)	(0.108)	(0.099)	(0.111)	(0.110)	(0.100)
Southwest	-0.081	-0.091	-0.111	-0.091	-0.079	-0.104
	(0.076)	(0.079)	(0.079)	(0.081)	(0.082)	(0.079)
Northwest	-0.236**	-0.238**	-0.232**	-0.228**	-0.228**	-0.228**
	(0.084)	(0.089)	(0.084)	(0.091)	(0.091)	(0.085)
Peten	-0.046	-0.060	-0.071	-0.073	-0.054	-0.069
	(0.095)	(0.101)	(0.096)	(0.104)	(0.103)	(0.097)
Rural	0.012	0.019	0.020	0.012	0.009	0.017
	(0.039)	(0.043)	(0.039)	(0.046)	(0.046)	(0.039)
Parental Ethnicity:	0.004	-0.007	-0.011	-0.010	-0.008	-0.004
Non-indigenous	(0.058)	(0.062)	(0.061)	(0.064)	(0.063)	(0.060)
Female	-0.028	-0.016	-0.044	-0.024	-0.014	-0.045
	(0.027)	(0.030)	(0.029)	(0.031)	(0.031)	(0.029)
Child's Primary Language:	-0.093	-0.092	-0.058	-0.098	-0.095	-0.082

Spanish	(0.096)	(0.102)	(0.104)	(0.105)	(0.104)	(0.100)
Child's Primary Language:	-0.328*	-0.458**	-0.292	-0.469**	-0.458**	-0.311
Other	(0.189)	(0.128)	(0.193)	(0.133)	(0.131)	(0.196)
Child's Other Language:	-0.117	-0.108	-0.102	-0.122	-0.113	-0.134
Spanish	(0.130)	(0.134)	(0.145)	(0.136)	(0.134)	(0.138)
Child's Other Language:	0.306	0.046	0.206	-0.028	0.046	0.256
Other	(0.427)	(0.182)	(0.449)	(0.188)	(0.184)	(0.449)
Child's Other Language:	0.040	0.064	0.054	0.074	0.064	0.055
None	(0.111)	(0.113)	(0.117)	(0.115)	(0.113)	(0.118)
Private school	-0.008	0.006	-0.005	0.010	0.006	0.002
	(0.055)	(0.064)	(0.056)	(0.067)	(0.067)	(0.056)
Age	0.002	0.006	0.000	0.006	0.007	0.001
	(0.006)	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)
Household wealth index	0.008	0.011	0.010	0.010	0.010	0.010
	(0.011)	(0.011)	(0.011)	(0.012)	(0.011)	(0.011)
Household received	-0.523**	-0.773**	-0.452**	-0.859**	-0.881**	-0.483**
international remittances	(0.209)	(0.318)	(0.211)	(0.355)	(0.365)	(0.212)
Parent migrated internationally	0.557**					
	(0.268)					
Father migrated internationally		0.476**				
		(0.242)				
Mother migrated internationally			2.576*			
			(1.484)			
Total months parents migrated				0.107*		
				(0.065)		
Total months father migrated					0.143*	
					(0.083)	
Total months mother migrated						0.660
						(0.505)
First-stage results						
Average international remittances per	0.882**	0.915**	0.175**	3.822**	3.132**	0.685*
household in municipality in 2000	(0.098)	(0.100)	(0.064)	(1.052)	(0.643)	(0.383)
Percent of households with	0.001**	0.001**	0.001**	0.001**	0.001**	0.001**
international migrants in 2000	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	6954	5757	6813	5616	5757	6813

Standard errors in parentheses. All values are weighted. Source: ENCOVI 2000
* $p < 0.10$, ** $p < 0.05$