International Migration, Spousal Control, and Gender Discrimination in the Allocation of Household Resources

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1 Introduction

In many developing countries, parental migration and the family separation it entails are often viewed as necessary evils in order to improve outcomes for the next generation. But the e¤ect of parental migration on children left behind is not so clear-cut, in part because the positive e¤ect of remittances may be overwhelmed by the negative e¤ects of parental absence from the home. While there is now a burgeoning literature evaluating the overall impact of parental migration on children's outcomes (Hanson and Woodru¤, 2003; McKenzie and Rapoport, 2006; and Antman, 2010a; Antman, 2010b), less e¤ort has been focused on exploring the mechanisms that underlie these e¤ects. This paper attempts to close that gap by examining a potentially important channel through which parental migration may a¤ect children: spousal control over the intrahousehold allocation of resources. In countries like Mexico, where it is most often the father that migrates, paternal migration necessarily involves a father's absence from the home and thereby allows for an increase in women's decision-making power. Does this change in household structure imply a shift in expenditures

is more likely to report he makes decisions regarding children's expenses alone when he has had recent migration experience, marking an evident increase in his decision-making power. Together, this evidence is consistent with a story in which the head's decision-making power wanes while he is away, resulting in a shift in resources toward girls, but then resurges upon

Nevertheless, this hypothetical experiment provides the motivation for a potential identification strategy. If we can look within the sample of families where household heads have had recent migration experience, we can in some sense control for the unobserved factors which may have induced migration and may well be correlated with household expenditures. The idea then, is to compare families where the head is still absent in the U.S. with those families in which the migrant head has already returned home. This type of differences-in-differences strategy can be implemented by means of a simple cross-sectional regression model where the fraction of expenditures spent on boys is a function of the migration experience and current migrant status of the head of household:

$$BoysExpRatio_{it} = {}_1USMigExper_{it} + {}_2USMigExper_{it} \quad CurrUSMig_{it} + X_{it} \quad + {}_{it} : \quad (1)$$

The dependent variable, $BoysExpRatio_{it}$, denotes the fraction of children's expenditures spent on boys, either in education or clothing. $USMigExper_{it}$ is an indicator variable for whether the household head has had any U.S. migration experience in the two years prior to the survey, regardless of whether he is currently in the U.S. or Mexico. $CurrUSMig_{it}$ is an indicator variable equal to one if the household head is currently in the U.S. and zero otherwise. As noted in the data section below, all household heads who are currently in the U.S. by definition have recent migration experience and are coded accordingly. The vector of covariates X_{it}

such, I have included the time subscript over the two waves of the survey (t = 1; 2). Since most households are observed in both waves, in the cross-sectional regression, I also include an indicator for whether the observation is in the second wave of the survey and cluster standard errors at the household level.

The idea of the identi…cation strategy in the above regression is that households may di¤er due to the endogeneity of out-migration, but comparing households who have had recent migration experience reduces this problem. However, it may still be the case that return migration to Mexico is still endogenous and that households for whom migrants have returned to Mexico by the time of the survey are di¤erent in unobservable ways that may also explain their di¤erences in expenditures by gender. To address this concern, I exploit the panel nature of the MXFLS and run the above regression in …rst-di¤erences:

$$BoysExpRatio_i = {}_1 \; USMigExper_i + {}_2 \; CurrUSMig_i + \quad X_i \quad + \quad _i ; \qquad (2)$$

where $BoysExpRatio_{it}$ has been replaced with $BoysExpRatio_i = BoysExpRatio_{i2} - BoysExpRatio_{i1}$. Similarly, each entry in the equation above equals the value in the second wave minus the value in the …rst wave.[2] Taking the di¤erence over waves of the survey allows for an examination of how household expenditures by gender change when the household

[2] Recall that by de…nition, $CurrUSMig_{it} = 1$ implies $USMigExper_{it} = 1$. Thus, I have replaced the interaction term $\Delta(USMigExper \quad CurrUSMig_{it})$ with $\Delta CurrUSMig_i$ since $\Delta CurrUSMig_i = 1$ implies the change in the interaction term equals 1. Furthermore, unlike $\Delta USMigrationExper_i$,

head has had any U.S. migration experience and when he is currently in the U.S. The idea here is that, by looking at changes in the household over time, we have in some sense controlled for time-invariant factors at the household level which a¤ect both out- and return migration and which may be correlated with household expenditures by gender.

Finally, an investigation of how gender discrimination changes with migration of the head of household would not be complete without some evidence of a mechanism. Unfortunately, household decision-making data are only available if heads are at home to participate in that module of the survey. Consequently, we cannot examine the e¤ects of current migration on household decision-making. Nevertheless, we can examine how household decision-making changes when household heads have had recent U.S. migration experience. I implement this using the following panel regression model in …rst-di¤erences:

$$HeadMakesDecision_i = \quad USMigExper_i + \quad X_i \quad + "_i ; \tag{3}$$

where $HeadMakesDecision_i = HeadMakesDecision_{i2} \quad HeadMakesDecision_{i1}$ and $HeadMakesDecision_{it}$; $t = 1; 2$; indicates the household head reports that he alone makes decisions regarding his children's clothing or the education of his children. In this way, household decision-making is directly tied to the estimates of the e¤ect of international migration on children's expenditures.

3 Data

3.1 Description

The data come from the Mexican Family Life Survey (MXFLS), a collaborative project managed by researchers in Mexico and the United States.[3] The MXFLS was designed to be a nationally representative panel data set of Mexicans that would follow households regardless of their decisions to reside in Mexico or the U.S. As a result, attrition is remarkably low in the sample, with around 90 percent of the baseline households surveyed in 2002 reinterviewed in the follow-up surveys, taking place mostly in 2005 (Rubalcava and Teruel, 2007).

For purposes of the current study, the MXFLS asks respondents detailed questions about income, expenditures, labor supply, schooling choices, and both short- and long-term migration histories. Unfortunately, temporary migration spells lasting less than one year are only

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the fact that they have not returned to Mexico.

The main outcome variables of interest relate to the fraction of children's educational and clothing expenditures spent on boys. With regard to educational expenses, the survey reports the amount of money spent during the current school period on (1) enrollment, fees, and exams, (2) school utensils and uniforms, and (3) transportation, separately for boys

expenditures on either girls or boys. I leave these as missing values, and as can be seen in the descriptive statistics, many families have missing values for either clothing or educational expenses.

Of the usable sample, 8,253 household-period observations have non-missing values for educational expenditures, 5,971 household-period observations have non-missing observa-

focus on the household head's responses, which for the most part, identify either him, his spouse, their children, or all of them together as the decision-makers in these categories. Using these data, I generate a binary variable equal to one if the household head reports making the decision alone regarding his children's clothes and zero otherwise. I generate an analogous dummy variable indicating the household head alone makes decisions regarding his children's education. Both of these variables will serve as measures of the strength of the household head's decision-making power in the analysis below.

3.2 Summary statistics

Table 1 presents descriptive statistics for the three samples used in the analysis. It is noteworthy that both the value of educational and clothing expenditures and the expenditure ratios themselves vary little across samples, providing additional reassurance that the missing values do not generate some observable selection pattern. For the most part, the same is true for other demographic characteristics of the household and head of household. Rates of attrition are very close across the samples, with about 47 percent of household-period observations observed in the second wave. The rates of recent migration experience of the head are also similar across samples, with around two percent of the household-period observations reporting the head to have had some U.S. migration experience in the past two years. The fraction of heads currently in the U.S. is about 0.7 percent of the household-period observations. Recall that this variable is only equal to one for households where the head has migrated in the second wave; it is closer to 1.5 percent of the households observed in the second wave.

Tables 2 through 4 highlight the identi..cation strategy used below by comparing mean values of variables of interest distinguished by the migration experience and current migration status of the head of household. Comparing those families with no recent migration experience (column 1) to those who have had recent migration experience, but are not currently in the U.S. (column 2), we see that there are some signi..cant di¤erences in some characteristics of the household head. For instance, in Tables 2 through 4, the fraction of

children's educational expenditures is lower for those with household heads in the U.S. (940 versus 2024 pesos), although the amount spent on children's clothing is the same for both groups (568 pesos).

Also note that throughout Tables 2 through 4, there is a consistent pattern of results for the expenditure ratios such that the average appears close to 0.5 for those families with no migration experience, rises with recent migration experience, and subsequently falls below the initial level if the household head remains in the U.S. in the second wave. Of course, these differences do not control for other demographic factors that may be changing over time, for instance household size and composition, that should surely affect household expenditures on children. For this reason it will be important to control for these variables in the analysis below. At the same time, return migration may itself be endogenous to household expenditures, and for this reason, it will also be useful to examine the panel results where the values of all variables are differenced over time at the level of the household.

4 Results

4.1 Cross-Sectional Results

Table 5 presents the cross-sectional regression results from estimating equation (1) with both the educational and clothing expenditure ratios as dependent variables. Panel A presents the results with boys' educational expenditure ratio as the dependent variable for both the sample with non-missing educational expenditure data (column 1) and the sample with non-missing values for both educational and clothing expenses (column 2). Panel B presents

4.2 Longitudinal Results

for the head of household and falls about 8 percentage points (-0.25+0.17) if the head is still in the U.S. relative to when he was at home. For the clothing outcome, the fraction of resources spent on boys rises 26 percentage points when the head has had some recent U.S. migration episode, but falls about 14 percentage points (-0.40+0.26) if the head is still in the U.S. relative to when he was at home.

4.3 Decision-Making Results

for which there are no missing values in all variables of interest. Therefore, a natural question to ask is whether the results for this sample match the results seen for the much larger sample above. For this reason, column (1) reports the results from the …rst-di¤erenced

5 Conclusion

the relative importance of spousal control as a mechanism in determining human capital and gender inequality for the next generation.

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Table 3: Cross-sectional Means by Head's US Migration Experience and Head's Current Location
Sample B: Non-missing Clothing Expenditures Data

	(1) No Recent Exper. Not Currently in US	(2) Recent Exper. Not Currently in US	(3) Recent Exper. Currently in US	(4) Diff. (1)&(2)	(5) Diff. (2)&(3)
	Mean	Mean	Mean		
Boys' Clothing Exp./Kids' Clothing Exp.	0.52	0.61	0.36	-0.099	0.252
	0.41	0.40	0.37	[0.045]**	[0.072]***
Kids' Total Clothing Expenditures	501	522	497	-21.249	25.908
	511	489	521	[54.097]	[96.611]
Household Size	4.99	4.88	4.33	0.107	0.554
	1.90	1.83	1.57	[0.202]	[0.312]*
Head's years of education	7.20	7.17			

Table 4: Cross-sectional Means by Head's US Migration Experience and Head's Current Location
Sample C: Non-missing Educational & Clothing Expenditures Data

	(1) No Recent Exper. Not Currently in US	(2) Recent Exper. Not Currently in US	(3) Recent Exper. Currently in US	(4) Diff. (1)&(2)	(5) Diff. (2)&(3)
	Mean	Mean	Mean		
Boys' Education Exp./Kids' Education Exp.	0.52	0.59	0.43	-0.070	0.164
	0.40	0.41	0.37	[0.054]	[0.088]*
Kids' Total Educational Expenditures	2240	2024	940	216.385	1083.407
	3651	3725	784	[488.159]	[507.106]**
Boys' Clothing Exp./Kids' Clothing Exp.	0.51	0.65	0.36	-0.140	0.290
	0.40	0.35	0.34	[0.046]***	[0.079]***
Kids' Total Clothing Expenditures	519.76	568.38	568.35	-48.617	0.022
	508.08	522.70	604.77	[68.490]	[134.822]
Household Size	5.20	5.03	4.43	0.162	0.605
	1.85	1.89	1.62	[0.248]	[0.393]
Head's years of education	7.25	6.75	6.19	0.505	0.561
	4.25	4.13	3.22	[0.541]	[0.820]
Head male	0.83	0.90	0.96	-0.064	-0.066
	0.37	0.30	0.19	[0.115]	[0.053]
Head's age	41.93	39.34	38.22	2.586	1.117
	11.87	11.44	8.74	[1.501]*	[2.247]
Head married	0.87	0.90	0.96	-0.031	-0.066
	0.34	0.30	0.19	[0.040]	[0.053]
Number of Observations	4342	59	28		

Standard deviation below mean. Standard error of difference in brackets.
Notes:
Migrant not included in household size calculation in column (3)
Monetary amounts are conditional on being below the 99th percentile

Table 5: Head's Migration and Gender Discrimination Cross-Sectional Regressions

Panel A: Dependent Var: Boys' Educational Expenditure as Fraction of Kid's Educational Expenditures

	(1)	(2)
Head: Any Recent Migration Experience	0.048	0.058
	[0.035]	[0.041]
Head: Currently in US	-0.059	-0.079
	[0.051]	[0.069]
Controls for Boy-Girl Composition by Age Group	YES	YES
Household Size	YES	YES
Sample[1]	A	C
Observations	8253	4429

Panel B: Dependent Var: Boys' Clothing Expenditures as Fraction of Kids' Clothing Expenditures[a]

	(1)	(2)
Head: Any Recent Migration Experience	0.082	0.12
	[0.032]**	[0.033]***
Head: Currently in US	-0.168	-0.205
	[0.056]***	[0.065]***
Controls for Boy-Girl Composition by Age Group	YES	YES
Household Size	YES	YES
Sample[1]	B	C
Observations	5971	4429

Robust standard errors, clustered at household level in brackets

Table 6: Head's Migration and Gender Discrimination, Household-Level Panel Regressions

Panel A: Dependent Var: Boys' Educational Expenditure as Fraction of Kid's Educational Expenditures

	(1)	(3)
Head: Any Recent Migration Experience	0.13	0.168
	[0.045]***	[0.075]**
Head: Currently in US	-0.157	-0.253
	[0.079]**	[0.127]**
Controls for Boy-Girl Composition by Age Group	YES	YES
Household Size	YES	YES
Regression in Household First-Differences	YES	YES
Sample[1]	A	C
Observations	2814	1001

Panel B: Dependent Var: Boys' Clothing Expenditures as Fraction of Kids' Clothing Expenditures[a]

	(1)	(3)
Head: Any Recent Migration Experience	0.052	0.264
	[0.066]	[0.096]***
Head: Currently in US	-0.177	-0.403
	[0.096]*	[0.121]***
Controls for Boy-Girl Composition by Age Group	YES	YES
Household Size	YES	YES
Regression in Household First-Differences	YES	YES
Sample[1]	B	C
Observations	1477	1001

Robust standard errors, clustered at household level in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%