THE INFLUENCE OF CONDITIONAL CASH TRANSFERS ON MIGRATION: A RE-EXAMINATION FROM A GENDERED LENS

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ABSTRACT

Past research on the influence of conditional cash transfers (CCTs)—widespread anti-poverty programs—on migration has focused on the household as a harmonious unit. Drawing on feminist critiques of the welfare state, this paper views both CCT programs and migration decision-making from a gendered, social control lens. CCTs actually rely on the informal work of women to manage other family members in order to fulfill program requirements. This paper contends that CCTs emphasize traditional gender responsibilities for women as mothers and caretakers, which constrain them to the domestic sphere and limit their likelihood of migration. Using event history models and data from the Mexican Family Life Survey, the analysis finds evidence supporting the hypothesis that CCT participation disproportionately limits migration for women over men. The paper broadly argues that such anti-poverty programs are not monolithically positive and emphasizes the importance of studying micro-level events for better understanding macro-level trends in migration and development policy.

INTRODUCTION

Improving outcomes for women and children, often under the banner of "women's empowerment," has emerged as a popular paradigm in international development programs over the past few decades (Burra, Deshmukh-Ranadive, and Murthy 2005; Narayan-Parker 2005). Many of these programs attempt to maximize positive outcomes by relying on the traditional roles played by women as mothers and homemakers, rationalizing that women are more likely to invest in the well-being of their families (Chant 2008; World Bank 2011). Recent critical work has noted the distinctly maternalist orientation of the emerging development model, wherein the focus on anti-poverty rests heavily on the shoulders of women to ensure responsible investment into the human capital of household dependents (Bradshaw and Víquez 2008; Chant 2008; Franzoni and Voorend 2012; Molyneux 2006; Tabbush 2010).

A commonly-cited ideal case of maternalist development policy is the conditional cash transfer (CCT) program, which is one of the most widely adopted aid strategies in place today on a global scale (Bradshaw 2008; Molyneux 2006; Tabbush 2010). Defined as welfare programs that allocate monetary aid on the condition that recipients fulfill certain health, education, nutrition, and other human capital growth requirements, CCTs aim to provide short-term financial assistance while also working towards moving recipients away from welfare dependency (Adato et al. 2000). Past studies evaluating CCTs have demonstrated that such programs have significant effects on outcomes like migration, school retention, health delivery, consumption smoothing, and cognitive development (Fernald, Gertler, and Neufeld 2008; Lagarde M, Haines A, and Palmer N 2007; Maluccio 2009; Rawlings and Rubio 2005; Skoufias et al. 2001; Stecklov et al. 2005; World Bank 2009). However, despite qualitative evidence illustrating how CCTs invoke Mother and Caretaker tropes by asking adult women to be

responsible for managing program requirements, no quantitative studies have yet considered how this may affect male and female beneficiaries differently across these outcomes. This paper suggests that the gendered biases characteristic of the current development paradigm and of CCTs in particular are a form of social control that reinforce women's roles within the domestic sphere, which can result in significant disproportionality across several demographic outcomes of interest.

Drawing on these points, this paper will specifically focus on the relationship between CCT participation and the likelihood of migration, which is an important outcome to consider given the growing importance of international and domestic population flows in terms of their magnitude and potential implications for socio-demographic dynamics (Castles, Miller, and Ammendola 2005; Massey et al. 1999). With CCTs imposing mother-caretaker responsibilities on women that are often inextricably tied to work in the domestic sphere, women who participate in such programs may be less likely to migrate compared to both their male counterparts and to non-beneficiary women.

Like past studies, this analysis will concentrate on the case of Mexico by running an empirical and theoretical analysis on the likelihood of migration given participation in Mexico's CCT program, PROGRESA/Oportunidades. Using longitudinal data from the Mexican Family Life Survey (MxFLS), the analysis will utilize discrete-time event history models to test the hypothesis that maternalism influences migration in gender disproportionate ways. It is hypothesized that CCTs can limit women's migration via two mechanisms of formal and informal social control—(1) restricting women's physical mobility with location-specific requirements as well as (2) equating being a "good woman" or a "good mother" to the successful management of program conditions concentrated within the domestic sphere.

The first section of this paper outlines the theoretical framework by first defining CCTs in greater detail, then reviewing past literature on CCT participation and migration, and finally noting the importance of taking a gendered perspective for better understanding the relationship between the two. The second describes the setting of the study, particularly the rationale for focusing on the Mexican case and the specific details of PROGRESA/Oportunidades. The third describes the hypotheses and analytical strategy in greater detail. The fourth discusses the results from the analysis, which provide evidence in favor of the hypothesis that PROGRESA/Oportunidades constrains beneficiary women's likelihood of migration. The final section summarizes the main argument and examines the implications of the empirical results on broadening our understanding of macro-level migration and development trends from a gendered, social control perspective.

THEORETICAL FRAMEWORK

CONDITIONAL CASH TRANSFERS

Conditional cash transfer (CCT) programs are one of the most widely implemented welfare assistance strategies in the world. At their inception in 1997, only a few pilot programs existed in Mexico, Brazil, and Bangladesh. Over a decade later, CCTs have been adopted in almost all countries throughout Latin America as well as in Turkey, Burkina Faso, Nigeria, Kenya, India, Pakistan, Cambodia, the Philippines, Indonesia, Jamaica, and the Dominican Republic (World Bank 2009). Though the exact form of these programs varies slightly from context to context, they are unified by the basic structure of conditionality, which allocates monetary assistance on the basis that recipients regularly fulfill requirements aimed at building their human capital. In many cases, these conditions require that children in beneficiary families regularly attend school, that family members attend health check-ups, and that families

nutritionally diversify their diets. Successful fulfillment of these conditions is necessary in order to receive the cash transfer, the amount of which can constitute a large percentage of household income. Failure to comply with such requirements may result in expulsion from the program or, at the very least, in a temporary loss of the cash transfer. In contrast to unconditional welfare, CCTs take a co-responsibility model towards poverty eradication that relies on both investments from the state and accountability from recipients (Adato and Hoddinott 2010; Handa and Davis 2006; Rawlings and Rubio 2005).

Past studies on the efficacy of CCTs have evaluated beneficiaries relative to non-beneficiaries across several outcomes like school enrollment retention, child cognitive development, birth weight, health-seeking behavior, and consumption smoothing (Barber and Gertler 2008; Behrman, Parker, and Todd 2005; de Janvry et al. 2006; Dearden et al. 2009; Dearden et al. 2009; Fernald, Gertler, and Neufeld 2008; Lagarde M, Haines A, and Palmer N 2007; Maluccio 2009; Rawlings and Rubio 2005; Skoufias et al. 2001). Most studies have shown that CCTs achieve their intended results. For example, a review of several health-oriented studies by Lagarde et al. (Lagarde M, Haines A, and Palmer N 2007) demonstrated that program participation was shown to reduce child illness, anemia, and stunting as well as to generally increase care-seeking behavior among beneficiary families. For education outcomes, Skoufias et al. (Skoufias et al. 2001), Dearden et al. (Dearden et al. 2009), and de Janvry et al. (de Janvry et al. 2006) showed how CCT participation can increase school enrollment and decrease the amount of time spent on other work by children. Based on these evaluations and other similar studies, the reception of CCTs has been largely positive, though some have begun to question the need for conditions at all (Baird, McIntosh, and Özler 2011; de Brauw and Hoddinott 2011).

The Influence of Conditional Cash Transfers on Migration

The relationship between CCTs and the outcome of interest for this study—migration—has been relatively understudied. All past work in the area has focused on Mexico's CCT program, PROGRESA/Oportunidades, due both to the rationale that Mexico's CCT program is generally representative of other CCT programs and to availability of data from the program's unique experimental design stage. Drawing on that data, Stecklov et al. (Stecklov et al. 2005) found that PROGRESA participation lowered the likelihood of international migration, arguing that cash from the transfer sufficiently tempered the incentive to leave by increasing beneficiary families' incomes. Subsequent studies by Angelucci (Angelucci 2012; Angelucci 2013) and Azuara (Azuara 2009) found that program participation actually increased the likelihood of out-migration. The former argued that the cash helped facilitate moves by formerly credit-constrained recipients while the latter discussed the long-term effects of human capital investment in helping recipients become more skilled and, hence, more marketable prospective migrants over time.

Pervasive throughout these past studies is a logic that attributes the effect of CCTs on migration to economic-related factors. Increasing family income, diversifying household income portfolios, increasing access to credit, or increasing prospective migrants' marketability as laborers were all cited reasons for the observed influence of CCTs. This economic logic or the lack of any mechanistic claim at all is broadly characteristic of most evaluations of CCTs. However, given that CCTs are structured in gendered ways so that certain family members derive greater benefit from these programs while others are allocated greater responsibilities, it is important to evaluate how CCTs may differentially impact various family members across these previously studied outcomes, including migration.

Gendered Perspective on Conditional Cash Transfers and Migration

This study takes a gendered perspective by recognizing that CCTs heavily rely on the informal work of women to manage program requirements, which in turn may mean that such programs do not uniformly affect male and female members within beneficiary families. Evidence from previous studies on CCTs in Nicaragua, Mexico, Chile, and Argentina have demonstrated that the conditionality of cash transfers falls disproportionately on women, who are tasked with attending public health lectures, completing community service hours, regulating household members' health checkups, and ensuring their children's school attendance (Bradshaw 2008; Bradshaw and Víquez 2008; Molyneux 2006; Tabbush 2010). Broader literature on the gender mainstreaming of international development programs has catalogued this maternalist dimension among several other development initiatives as well, including the much-publicized campaigns for microcredit (Chant 2008; Franzoni and Voorend 2012; Molyneux 2006).

The fact that many such programs rely on pre-existing Mother and Caretaker tropes tied to female identity complicates this maternalism. Bradshaw and Víquez (2008) argue that both practitioners and beneficiaries assume that any actions needed to improve the well-being of children, including fulfilling CCT obligations, are not a "burden" for women but rather inherently "part of the mothering role." Though these feelings of maternal obligation may already exist among recipients and non-recipients alike, tying program obligations to these mother-caretaker roles are hypothesized to intensify these roles and obligations for beneficiary women above and beyond what would be the case for their non-beneficiary counterparts.

Given that women are disproportionately expected to manage program requirements—many of which are concentrated within the domestic sphere—this paper hypothesizes that CCTs significantly lower the likelihood of migration for beneficiary women compared to both

beneficiary men and non-beneficiary women. CCT participation is expected to limit the likelihood of adult women's migration via the two following mechanisms of formal and informal social control: (1) participation requires predominantly women to physically remain at the place of origin in order to fulfill program requirements (i.e. receiving cash transfers, attending maternal and child health lectures, completing community service requirements, etc.) and (2) CCTs invoke traditional gender expectations in order to equate being a "good woman" or being a "good mother" to women's successful management of program requirements, roles that chiefly confine them to the household.

As an added caveat, household structures within many countries with CCT programs are commonly multigenerational so that grandmothers, mothers, and daughters often live under one roof. Because of this, not all beneficiary women are expected to be affected equally by CCT requirements, especially early life stage daughters. Children, including these daughters, are seen by CCTs as the primary beneficiaries of the programs' investments, in contrast to adults, especially women, who are viewed as the instruments of CCT policy. Adult women, upon whom the "traditional" responsibilities of childcare and housework may already fall, are then expected to be the most constrained by CCT requirements. Since maternalist program requirements can apply to multiple adult women living under one roof who share responsibilities, marital status, then, is used in the following analysis to differentiate between those who are expected to play some traditional mother/caretaker role versus those who do not. As for the type of migration that may be affected, the program's requirements should restrict women to the domestic sphere regardless of whether the migration is permanent, temporary, domestic, or international, so all migration types will be considered.

SETTING

MEXICAN CASE STUDY

The rationale for concentrating on the Mexican case is threefold: (1) A rich literature already exists regarding Mexican migration and gender relations because of the country's shared history with and close proximity to the United States (Hondagneu-Sotelo 1992; Hondagneu-Sotelo 1994; Kanaiaupuni 2000; Massey, Fischer, and Capoferro 2006; Pedraza 1991; Sanders 2009); (2) The Mexican migration stream is similar to many other industrializing-country migration patterns throughout Latin America, making it somewhat generalizable (Donato et al. 2010); (3) Mexico's CCT program of interest for this paper—PROGRESA/Oportunidades—is a model CCT program, and its structure draws on Motherhood tropes in similar ways to other women's empowerment programs, making it an ideal case to test this particular hypothesis (Molyneux 2006).

PROGRESA/OPORTUNIDADES

Mexico piloted PROGRESA in 1997—later renamed Oportunidades in 2001 and presently known as PROSPERA—which has since been heralded as one of the most successful CCT programs in terms of both population coverage and observed outcomes (Barber and Gertler 2008; Behrman, Parker, and Todd 2005; Fernald, Gertler, and Neufeld 2008; Skoufias et al. 2001). PROGRESA began as a simple program that allocated two kinds of welfare assistance to qualified beneficiaries: a food grant and an education scholarship. Both were dispensed on a bi-monthly basis on the condition that beneficiaries completed certain requirements. The food grant for the amount of US$16 per month (in 2001 dollars) would be distributed to families only if all members attended an annual clinic check-up and some members attended public health information sessions (Stecklov et al. 2005). The education scholarship was slightly different in

that the amount received by the family varied by the number of children present. All children from 7 to 18 were qualified to participate and were required to attend school up to 85% of the time each month. Failure to meet the attendance requirement would lead to a loss of the cash transfer for that month for that particular child. By 2001 the program expanded considerably to offer a variety of subsidies and grants that built on PROGRESA's previous efforts, including greater financial incentives for youths to finish high school, cash transfers to purchase school supplies and uniforms at the beginning of academic terms, nutritional supplements for infants, and additional cash transfers for senior citizens (Secretería de Desarrollo Social 2014).

Oportunidades covered over 4 million families in 2002—the year of the first survey wave utilized in this analysis—and in some of the poorest states like Chiapas and Oaxaca where the number of qualifying families is high, the percentage of beneficiary families can range anywhere between 45% to 60% of the total state population (Secretería de Desarrollo Social 2014; Stecklov et al. 2005). The amount of money directly received from the program is substantial, amounting to 22% of a family's original, pre-participation income on average (Angelucci 2013).

Though the primary mission of Oportunidades is to build the capabilities of Mexico's poorest families, the program itself (alongside other CCT programs) relies heavily on the informal work of women. Rivero (Rivero 2002) reported that beneficiary women felt as though the program "treated [them] badly" or that they "were asked to do things in ways that offended their dignity" including seemingly unnecessary chores or tasks. Specifically, built into the structure of how Oportunidades operates is a gendered division of labor that requires women to be accountable in three direct ways that tie them to domestic work:

- Women, often the mothers, are the parties to whom the regular cash transfers are distributed.

- Attendance of public health lectures regarding maternal, child, and infant health are asked of mothers and pregnant women but not for other family members.
- Community chores related to the program, like cleaning and event set-up, are asked and sometimes required for participating women.

HYPOTHESES

Based on the theoretical framework, this paper will directly test two hypotheses:

H1: Women whose families participate in Oportunidades are less likely to migrate compared to men whose families participate in Oportunidades as well as to non-beneficiary men and women.

H2: Married women whose families participate in Oportunidades are even less likely to migrate compared to unmarried women whose families participate in Oportunidades and both married and unmarried non-beneficiary women.

DATA AND METHODS

DATA

The analysis utilizes data from the Mexican Family Life Survey (MxFLS), which is the first nationally representative survey of the Mexican population that follows respondents regardless of their migration decisions. Intended for understanding the intersection between economic, socio-demographic, geographic, and biological characteristics of the Mexican population, the survey's multi-thematic design also makes it well suited for studying the intersection between migration, development, and gender. The baseline sample design is probabilistic, stratified, and multi-staged in which every phase is an independent sample of households in Mexico during 2002. The primary sampling units were chosen according to pre-established demographic, economic, and geographic characteristics meant to be representative of the Mexican population. In total, approximately 8,440 households were sampled, corresponding

to about 35,000 individuals living within 150 communities (Rubalcava and Teruel 2006; Rubalcava and Teruel 2008; Rubalcava and Teruel 2013). Using all survey waves that are currently available, the analysis will draw on data from Wave 1 (2002), Wave 2 (2005-2006) and Wave 3 (2009-2012). Limiting the sample to just those at risk of migrating independently (i.e. those age 15 and over) and restructuring it to hazard file format, the final sample includes a total of 45,568 person-interval observations, where interval refers to the periods between sequential waves, for a total of 25,931 unique individuals.

MxFLS is characterized by a moderate percentage of missing observations along some variables, particularly that for migration (~ 17%). Since many respondents were interviewed even if they migrated between waves, the issue of sample loss due to migration is not as problematic as it is for similar kinds of surveys. Wave 2 and Wave 3 managed to relocate and re-interview about 90% of the original sampled households, the remainder of which can partially account for the missing observations. It is unclear what may account for the remaining attrition from the sample. This paper makes an effort to partly address the issue of missing cases by running the analysis separately on both a listwise deleted data set and on a multiply imputed data set created via chained equations using the *mice* package in R (van Buuren and Groothuis-Oudshoorn 2011). Only results from the multiply imputed data set will be reported because both are substantively similar.

METHODS

The analysis uses discrete-time, event history models and logistic regression equations focusing on the experience of the first observed migration event since 2002—the beginning of the survey. Event history models were chosen in order to take advantage of the longitudinal structure of the data to allow for time-varying variables. Migration was defined as any reported

migration by the respondent for three months or longer to any locality outside of the respondent's original community. The data is structured so that individuals are observed from the intervals between t and t + 1 as well as between t + 1 and t + 2. All time-varying independent variables are lagged by one wave so that the report of a migration event is considered at either t + 1 or t + 2 while associated independent variables are measured at t and t + 1, respectively. Time-unvarying independent variables are held constant at their values at time t.

Only individuals present in Mexico during time t are included in the analysis, and they continue to be included until they experience their first migration event, become deceased, or the survey ends, at which point they are removed because they are no longer "at risk" or are no longer observed. For each interval, the outcome is defined as 1 if the individual experienced any migration, whether international, domestic, permanent, and/or temporary, or as 0, if no migration was experienced. The same model specifications were used to analyze disaggregated migration outcomes—just international, just permanent, and just temporary—but all were substantively similar, so only the results for any migration event will be reported since women are expected to be restricted regardless of migration type.

Most controls used in the analysis are similar to conventional measures of socio-demographic traits in other migration studies, including measures for age, sex, marital status, income, etc. (Massey and Espinosa 1997; O Stark and Taylor 1991; VanWey 2004; VanWey 2005). Some deserve further explanation. For example, dwelling status is divided into those who own or are paying off a home, those who rent, and those living for free off borrowed or *ejido* (community-owned) land, which are all categorically different relationships for property ownership. Access to credit is included since some studies theorize that lack of credit may act as a binding constraint on migration while others contend that households migrate in order to gain

Table 1 Descriptive Statistics

	N	Min	Mean	Max	S.D.
Log income	45,568	0.00	8.09	23.03	4.00
Age	45,568	15	38.61	110	18.07
Migration history count	45,568	0	0.53	15	1.07
Economic insecurity	45,568	0	0.38	6	0.67
Migrant network	45,568	0	0.19	0.56	0.12
Log hours of chores					
Sex					
Male	21,384	-	-	-	-
Female	24,184	-	-	-	-
Marital status					
Married	22,643	-	-	-	-
Unmarried	22,925	-	-	-	-
Education					
No high school	34,694	-	-	-	-
High school or above	10,874	-	-	-	-
Access to credit					
No	30,516	-	-	-	-
Yes	15,052	-	-	-	-
Dwelling status					
Own/paying off	35,068	-	-	-	-
Rent	2,632	-	-	-	-
Borrow/ejido land	7,868	-	-	-	-
Rural					
No	27,424	-	-	-	-
Yes	18,144	-	-	-	-
Participates in Oportunidades					
No	37,973	-	-	-	-
Yes	7,595	-	-	-	-
Any migration					
No	43,280	-	-	-	-
Yes	2,288	-	-	-	-

access to credit (Angelucci 2013; Phan 2012; Oded Stark and Bloom 1985). Economic insecurity is often not included as a control in migration studies, but it is important given that many migration events could be motivated by the experience of some economic shock. Oportunidades provides households with additional income that can be used to cushion against such shocks, which may confound the relationship between migration and Oportunidades participation, so it is

important to use some measure of shocks as a control. Here, economic insecurity is measured by counting the number of shocks experienced by the household, defined as any adult household member death, illness, hospitalization, job loss, business failure, crop failure, or livestock death. Lastly, the measure for number of hours spent on household chores in the past week is included in order to control for selection into the CCT program based on gender ideology. Some might argue that women who are more gender traditional to begin with are also more likely to participate in the program and less likely to migrate. In order to control for gender ideology, the analysis uses the number of hours spent on household chores because this measure is traditionally used to control for gender ideology in the family demography literature . Table 1 includes descriptive statistics for all final variables used, and Table 2 includes the definitions of each variable.

Four models will be presented in total to illustrate the test of the hypotheses, using the following logistic equation to estimate the log odds of migrating:

$$\log\left(\frac{P_{migration}}{1 - P_{migration}}\right) = \alpha + \beta' x_{it}$$

where α represents the intercept, β' is a vector of estimated coefficients for each independent variable, and x_{it} represents the value for individual i at time interval t, though some variables are time invariant. The estimated coefficients are converted and presented in odds form by exponentiating each estimated log odds.

The first model presented is a simple baseline model for all adults at risk, including all control variables but no primary independent variables. The second model includes the baseline specification and the measure for participation in Oportunidades to illustrate the total direct effect of the program on migration. The third model includes the baseline specification along

Table 2 Definitions of Variables

Variable	Definition	Time-Varying
Outcome Variable		
Any migration	Whether a respondent migrates: internationally, domestically, permanently, and/or temporarily = 1 or does not migrate = 0	Yes
Primary Independent Variables		
Participates in Oportunidades	Whether a household participates in Oportunidades: participates and receives money = 1 or does not participate or participates but does not receive money = 0	No
Participates in Oportunidades * Marital Status	Interaction between being single and part of a household that participates in Oportunidades	Yes
Participates in Oportunidades * Sex	Interaction between being male and part of a household that participates in Oportunidades	No
Control Variables		
Individual		
Sex	Reported sex of individual: male = 1 and female = 0	Yes
Marital status	Marital status of individual: single, divorced, or widowed = 1 or married = 0	Yes
Age	Age of individual in years	Yes
Education	Any high school education or above = 1 or no high school and below = 0	Yes
Income	Log of any income (agricultural or non-agricultural) made within past 12 months	Yes
Migration history	Count of any previous individual migration events	No
Access to credit	Has access to borrowing from any formal (e.g. bank, cooperative) or informal (e.g. friends, relatives) source of credit = 1 or not = 0	Yes
Hours of chores	Log number of hours spent on housework, childcare, and senior care during the last week before being interviewed	Yes
Household		
Economic insecurity	Count of number of events experienced 5 years prior to t and 3 years prior to t + 1, including household member deaths, illnesses, hospitalizations, business failures, job losses, natural disasters, crop failures, and livestock deaths/thefts	Yes
Dwelling status	Status of the primary dwelling unit for the household: borrowed or ejido land = 2, rented = 1 or owned/paying off = 0	Yes
Community		
Rural	Household resides in a community with a population less than 2500 = 1 or in a community with a population at or above 2500 = 0	No
Migrant network	Proportion of surveyed individuals with any migration history in respondent's community divided by total number of surveyed individuals from that community	No

with all the primary independent variables, where the relationship of central interest is the interaction between sex and household participation in Oportunidades. As a test of H1, the third model is intended to illustrate how the program differentially affects beneficiaries based on gender. The fourth model subsets the data to just women at risk, resulting in 24,184 person-interval observations for 13,828 unique individuals. The relationship of central interest here is the interaction between marital status and Oportunidades. As previously stated in H2, besides just affecting women and men differently, the program should also have an even greater effect on women who are married compared to unmarried women given that the former is expected to have more maternal obligations and expectations. Plotted predicted probabilities are used in Figure 1 and Figure 2 to demonstrate these points more clearly, where confidence intervals were estimated for each via bootstrap methods.

Due to the structure of hazard files as well as the household-level scope of PROGRESA/Oportunidades, the robcov() command from the *rms* package in R was used to adjust for clustering at the individual and household levels. The function uses the Huber-White method to adjust the variance-covariance matrix of a fit from maximum likelihood in order to correct for heteroscedasticity and for correlated responses from cluster samples (Harrell, Jr. 2014).

RESULTS

SOCIO-DEMOGRAPHIC MEASURES

The estimated coefficients for the socio-demographic controls are relatively consistent across all five models, though the women-only sample for the fourth model is unsurprisingly somewhat different. The estimates also generally align with similar findings and theory in the literature on Mexican migration. Unmarried individuals are more likely to migrate than those

who are married, which is comparable to findings in the life course literature that suggest that being unmarried comes with fewer spatial ties (Kanaiaupuni 2000; Sandefur and Scott 1981). The odds of migrating slightly decrease with age, so younger individuals are more likely to migrate, which also aligns with the life course perspective (Leslie and Richardson 1961; Ritchey 1976). Owning versus renting a home, which is related to other factors important for migration risk like asset accumulation and wealth, also lowers the likelihood of migrating.

Having access to credit, whether formal or informal, slightly increases the odds of migrating, which is consistent with the literature that argues that lack of credit is a binding constraint on the resource-poor (Angelucci 2013; Rapoport 2002). Those with a higher education (i.e. some high school or above) are more likely to migrate compared to those who never attended high school, which is consistent with claims that argue that those with more human capital are better able and, thus, more likely, to migrate (Azuara 2009; Feliciano 2005). Making a greater amount of income slightly increases the odds of migrating, which may also speak to resource constraints on migration.

Additionally, as the number of past migrations increases, the odds of migrating also increase, which may indicate that individuals benefit from having more experience from previous migration events (VanWey 2005). The estimate for migration network, which has a large standard error, is not significant. As the number of economic shocks experienced by a household increases, the likelihood of migration also increases, which is unsurprising since events like natural disasters, bouts of unemployment, and crop failures may prompt migration (Hansen and Oliver-Smith 1982; Ritchey 1976). Moreover—consistent with many migration studies—those from rural areas are more likely to migrate than those from non-rural areas, and men are more likely to migrate than women (Fields 1975; Kanaiaupuni 2000; Massey, Fischer,

Table 3 Discrete Time, Event History, Logistic Regression Models

	Dependent Variable: Odds of First Observed Migration							
	Model 1: Baseline		Model 2: W/ just program		Model 3: W/ all predictors		Model 4: Women Only	
	β	z-score	β	z-score	β	z-score	β	z-score
Intercept	0.05***	-21.22	0.05***	-20.41	0.06***	-19.96	0.05***	-14.85
Individual								
Sex, male	1.50***	6.36	1.50***	6.29	1.42***	5.37	-	-
Marital status, unmarried	1.34***	4.76	1.34***	4.75	1.25***	3.48	1.32**	3.27
Log income	1.03***	4.90	1.03***	4.87	1.03***	4.86	1.03***	4.07
Education, high school +	1.10†	1.68	1.09	1.54	1.09	1.55	1.21*	2.36
Age	0.97***	-14.07	0.97***	-14.18	0.97***	-14.14	0.97***	-8.91
Access to credit, yes	1.16**	3.19	1.16**	3.08	1.16**	3.13	1.17*	2.25
Migration history count	1.29***	11.63	1.29***	11.62	1.29***	11.58	0.19***	7.30
Log hours of chores	1.05*	2.42	1.04*	2.34	1.05*	2.40	1.02	0.86
Household								
Dwelling, rent	2.00***	7.22	1.99***	7.18	1.99***	7.20	2.13***	6.60
Dwelling, borrow/ejido	1.27***	3.39	1.28***	3.41	1.28***	3.41	1.25*	2.34
Economic insecurity	1.23***	6.25	1.23***	6.27	1.23***	6,29	1.18***	3.77
Community								
Rural, yes	1.21**	3.19	1.28***	3.88	1.28***	3.89	1.26**	2.83
Migrant network	0.89	-0.34	0.76	-0.76	0.76	-0.76	1.04	0.08
Oportunidades Participation			0.81*	-2.55	0.47***	-5.04	0.40***	-4.39
Oportunidades* Male					1.43**	2.60	-	-
Oportunidades* Unmarried					1.65**	3.05	2.19***	3.38
No. of Observations	45,568		45,568		45,568		24,184	
Likelihood Ratio	1076.47		1086.15		1108.63		456.89	

Note: p(<.1† , <0.05 *, <0.01 **, <0.001***)

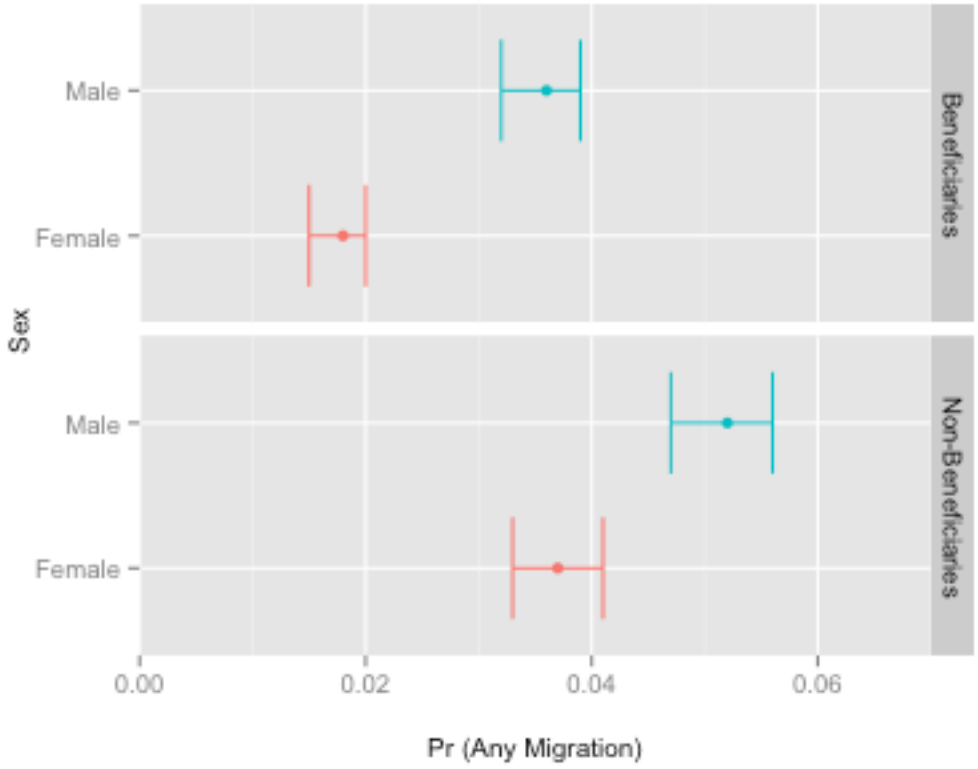
and Capoferro 2006; Todaro 1969). In the first three models that use the full sample, performing a greater number of hours on chores is associated with a slightly higher likelihood of migration, though this relationship is no longer significant for the model with just women.

Interactions between Oportunidades Participation, Gender, and Marital Status

Model 2 illustrates the effect of program participation without any interactions where participating in Oportunidades is shown to lower the odds of migrating by 0.81. This is consistent with findings from Stecklov et al. (2005) and inconsistent with findings from Azuara (2009) and Angelucci (2013), though each used different data and model specifications. Model 3 is the primary test of H1, where the interaction between sex and participation in Oportunidades is of central interest. The estimated coefficients show that men whose families participate in Oportunidades have a 2.03 higher odds of migrating than women whose families also participate in the program, significant at the $p < 0.01$ level. This supports the hypothesis that women beneficiaries are less likely to migrate than their male counterparts. It should be noted that Oportunidades does lower the odds of migrating for both men and women in participating families in this model, which corresponds to similar findings from Stecklov et al. (2005). However, within beneficiary families, the important relationship here is the significant interaction between sex and program participation, which demonstrates that even within the program itself, there are gender-based differences in terms of who is disproportionately affected. The direct effect of Oportunidades participation in Model 3 is also somewhat different from that estimated in Model 2, where the Model 3 estimate is larger in magnitude and more significant compared to the smaller and less significant effect in Model 2 in which the program is not interacted with gender. Figure 1 illustrates the test of H1 by plotting predicted probabilities of migration for beneficiary and non-beneficiary men and women. The center points represent the

predicted probabilities themselves, and the whiskers show the 95% confidence intervals. Consistent with the hypothesis, beneficiary women are the least likely to migrate, followed by beneficiary men and non-beneficiary women, and lastly by non-beneficiary men.

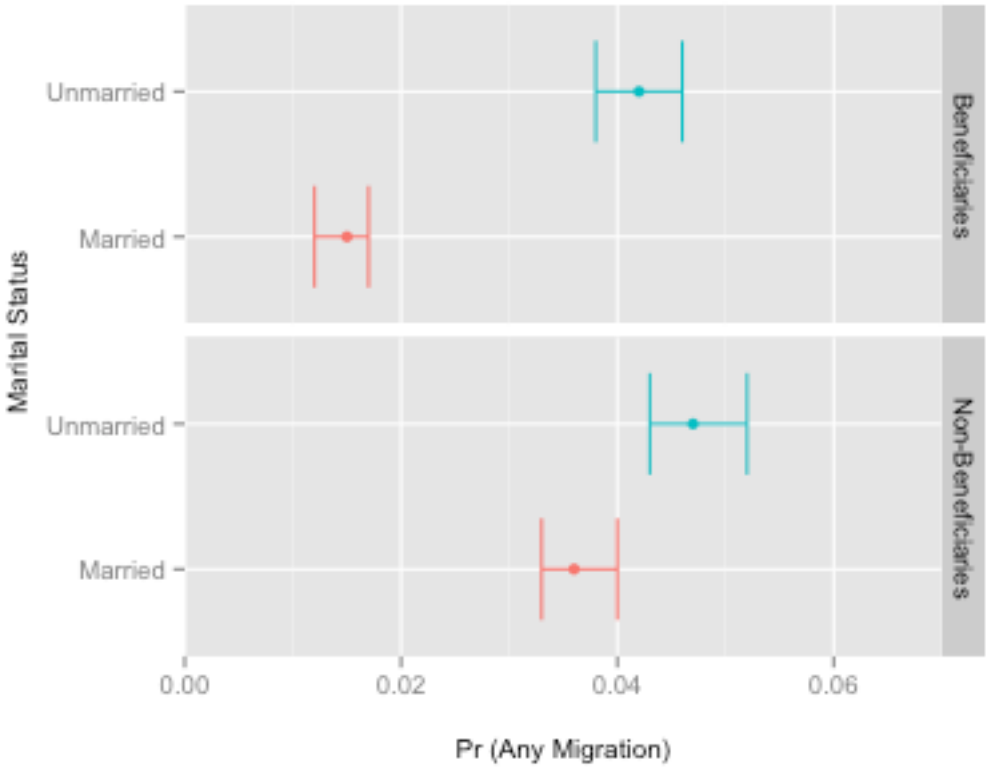
Figure 1. Predicted Probability of Migration for Beneficiary and Non-Beneficiary Men and Women



Beyond just basic dissimilarities between risk of migration for beneficiary men and women, however, is still the difference among women whose families benefit from Oportunidades. The program's requirements, which impose greater restrictions and responsibilities on women who are already expected to fulfill mother-caretaker roles, should have a greater effect on limiting the odds of migration for married women beneficiaries compared to unmarried women beneficiaries and both married and unmarried of non-

beneficiaries. In order to empirically test H2, Model 4 analyzes the interaction between marital status and Oportunidades participation for just women in the sample. The estimated coefficients demonstrate that unmarried women whose families participate in the program have a 2.89 higher odds of migrating than married women in participating families. This result supports the idea that the program really imposes its restrictions on women already tied in some way to matricentric gender responsibilities. Figure 2 illustrates the predicted probabilities of migrating for married and unmarried women beneficiaries and non-beneficiaries, holding all other characteristics equal. By and large, the figure illustrates that married women are disproportionately affected by Oportunidades participation in that they are far less likely to migrate than any other group.

Figure 2. Predicted Probability of Migration for Unmarried and Married Beneficiary and Non-Beneficiary Women



CONCLUSION

Based on the results from the analysis, this paper argues that there is evidence to support the claim that PROGRESA/Oportunidades participation disproportionately reduces the likelihood of migration for women over men, especially for women already tied in some way to traditional mother-caretaker expectations. The theoretical framework presented earlier is also supported by these findings. Grounded in the notion that it is important to take a gendered perspective when studying the relationship between CCTs and migration, it critiques the gender-blind approach of past research and emphasizes the integral role of gender in shaping both migration decision-making and the division of responsibilities imposed by maternalist development programs. Such expectations often emphasize being a "good woman" or a "good mother" as being analogous to the completion of CCT-specific duties concentrated within the domestic sphere, which can restrict women's migration.

More broadly, though, the results also support the notion that inspecting micro-level actions can reveal important caveats to macro-level trends. Though some have pointed to the growing gender mainstreaming of anti-poverty policy as representative of gains in women's rights, much of the rhetoric and practice of these programs remain affected by traditional gender norms. Development campaigns claiming to promote women's empowerment, resultantly, are not monolithically positive. Though these may increase positive outcomes for some beneficiaries, many draw on traditional gender roles that reinforce patriarchal or paternalistic structures that may hinder women along other dimensions. This paper has contributed to research in this area by beginning to unpack some of the micro-level pathways that may contribute to limiting women's movement beyond the domestic sphere via patriarchal development paradigms. More research on how particular development programs affect various outcomes for

gender-disaggregated groups is needed to advance research on development from a gendered perspective.

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