

Remittances and gender discrimination

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Abstract

It is recognized that female migrants experience a ‘double disadvantage’, first as immigrants and second as women. Although, this can imply higher economic and psychological migration costs, little research has explicitly focused on the role of female discrimination at destination as remitting device. This paper empirically tries to reconsider the relationship between gender and remittances in a micro setting including gender discrimination in the analysis. Preliminary macro results to be confirmed using individual level data (see footnote 3) show that females remit more and that a more discriminating destination environment leads to higher amount of remittances acting as an important return migration incentive for female migrants residing abroad. Estimation results suggest that gender inequality in the global economy (i.e. the remittance sending countries) have an indirect effect on migration origin country’s development through the increase of private financial flows.

Keywords: International Migration, Remittances, Gender Discrimination

JEL Classification: J16, F22

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1 Introduction

In the last few decades, international migration has been characterized by rapidly increasing feminization. On a global scale, the number of women who migrate is equal to that of men, and in certain regions is even higher. In 2000, women amounted to approximately 49 per cent of the total number of migrants in the world. More precisely, migrating women and girls were slightly more numerous than men in developed countries. In developing countries, however, they totalled slightly less than 45 per cent of all migrants. On a regional level, migrant women numerically outnumbered men in Europe, Latin America and the Caribbean, North America and Oceania, while in Africa and in Asia they were generally underrepresented when compared to men. In addition, women tend to migrate more independently rather than for family reunification reasons or as dependants of male migrants. These new migration patterns are not without impact in terms of economic and social development (Verschuur, 2004). There is evidence, for example, that women are better than men as decision makers within the households and human capital transmitters¹. Few works have already evaluated the overall impact of parental migration on children's outcomes (Hanson and Woodruff, 2003; Rapoport and McKenzie, 2006), for example, with some studies pointing to harmful effects for boys (Antman, 2012) and in some cases positive effects for girls (Antman, 2010). Restricting the analysis to the absence of mother migrants, then, Cortes (2011) finds that children left behind in the Philippines are more likely to lagging behind in school. So, from a human capital perspective, female migration would be detrimental for growth.

However, the absence of women can be compensated, by the money they send back home as remittances. Many papers have addressed the financial contribution of female migrant workers to their country of origin underlying how men and women differ as far as their intentions to remit are concerned. On one hand, females would remit more both overall and as a percentage of income because they tend to maintain stronger networks with their restricted and extended family (Tacoli, 1999; Richter and Havanon, 1995; Pongpaichit, 1993; Chant and Radcliffe, 1992) and because their remitting behaviour is driven more by altruism (Orozco, Lowell and Schneider, 2006). Inversely, women would remit less because of disadvantaged labor market conditions (Cortes, 2011) and family reunifications (Holst, Schafer and Schrooten, 2012).

Departing from a macro setting in which the female composition of the migration diaspora in the destination country is positively associated with the amount of remittances sent back to origin (Le Goff and Salomone, 2014), this paper tries to test for female altruism in a micro setting. The added value of our analysis will be interacting the gender of

¹Even if econometric results need to take into account self selection issues (Duflo, 2012).

the migrant with the economic and social discrimination experienced in the destination country, trying to see whether the so called ‘double discrimination’ is an issue at stake².

From a general viewpoint, this mean exploring if gender inequality in the global economy (i.e. the remittance sending countries) have an indirect effect on migration origin country’s development through the reduction/increase of private financial flows.

Preliminary empirical results using macro data³ show that females remit more and that a more discriminating destination environment can lead to higher amount of remittances sent back to origin. Behind these apparently counterintuitive conclusions, there can be two explanations that cannot be further explored in a macro setting. Discrimination acts as return migration incentive for female migrants residing abroad (Dustmann and Mestres, 2010). Or, females are simply more altruistic than men (Andreoni and Vesterlund, 2001; Abrego, 2009). Beyond any interpretation, the results are worthy of note since they suggest that gender inequality in the global economy have an indirect effect on economic inequality among households in the local economy.

The remainder of this paper is organized as follows. Section 1.1 defines female migrants’ discrimination, section 2 describes the datasets used to conduct the empirical analysis. Section 3 provides the two specifications estimated distinguishing between base specification and augmented one with gender discrimination interactions. Finally, Section 4 concludes.

²Little research has explicitly focused on the role of female discrimination in the destination country as remitting device except for Gorodzeisky and Semyonoy (2006) that analyse the role of market discrimination against Filipinas migrants.

³Macro results need to be taken with caution since the discrimination data for the all population (including natives and immigrants) is used instead of for just the immigrants’population. We have just received the micro data to be used from the *Foundation for Initiatives and Studies on Multi-Ethnicity* (ISMU) which monitors the immigration experience in the Lombardia region, the most preferred immigration destination in Italy. The Survey of interest conducted by the Regional Observatory for Integration and Multiethnicity (ORIM) goes from 2002 to 2013 and contains baseline questions concerning individual characteristics plus the monthly expenses for food and clothes; housing; savings and remittances. Beside, there are also ad-hoc questions such as the ‘perceived discrimination at destination, just available for years 2012 and 2013. Moreover, a few variables on social integration such as sense of belonging to Italy, the importance to obtain Italian citizenship are present in order to test if discrimination can have an effect on remittances through an intention to return. In other terms, we can presume that a channel through which discrimination affects the amount of remittances is the desire of coming back home. It is indeed recognized⁴ that return intentions have a positive effect on remittances. Our purpose is to test the estimation results of Section 2 with these more appropriate data.

1.1 Female migrants' double disadvantage

In analyzing the female propensity to remit, there is no way of getting around discrimination conditions in the destination country. Indeed, it is universally recognized that female migrants experience a 'double disadvantage' of being both migrants and women (UNFPA, 2006)⁵ that having a direct effect on economic and non economic migration costs can in turn influence female remitting behaviour.

The most frequently encountered issues regarding women migrant workers' discrimination are occupational segregation, low remuneration, heavy workloads with long working hours, limited training facilities, poor career development, and in some countries lack of freedom of movement, as well as recorded abuses. Their jobs are usually low on the occupational ladder. The best example is domestic work where, because of the highly personal relationship with their employers, psychological, physical and sexual abuse is common. In some countries, women migrants are required to work unpaid overtime, their wages are withheld and they do not enjoy weekly rests. Women migrant workers' jobs, even less than men's, are usually not covered or inadequately covered by labour legislation or other social security or welfare provisions. According to Vega Ruiz (1994), the fact that domestic work takes place within the household, determines its exclusion from the ambit of labour law. Domestic work is done in households (not considered as workplaces) of private persons (not considered employers) that cannot be supervised by labour inspectors.

Moreover, many migrant workers, especially women, sacrifice themselves in occupations for which they are overqualified. Some of them possess university degrees or professional qualifications as architects, doctors or accountants. A large number of these women migrant workers enter domestic work and have a difficult time, especially if they are undocumented, climbing the occupational ladder. One of the main reasons why there is so much 'brain waste' is the lack of legal opportunities for labour migrants and the lack of a system of mutual recognition of diplomas between major countries of origin and countries of destination.

In addition, temporary and part time contracts are a further source of migrant women's employment disadvantage.

However, although labor migrants, and females in particular, are usually relegated to the least desirable occupations and to the lowest paying jobs in host societies, their earnings are considerably higher than what they could possibly earn in their countries of origin

⁵According to Rubin et al. (2008), of the two dimensions of disadvantage (gender and migrant), the migrant unemployment differential (for women) is generally larger than the gender unemployment differential (for migrants). Moreover, comparing EU-born migrant women with those born in third countries reveals a third axis of disadvantage: third-country migrant women's unemployment rates are 5.6 percentage point higher than those of EU migrants (14% and 84% respectively)

(Semyonov and Gorodzeisky, 2004; Go, 1998; King, 1997; Jasso and Rosenzweig, 1990; Semyonov, 1986) and this leaves the room for remittances. Indeed, labor migrants view their overseas employment as a temporary solution to economic problems in their country of origin, as a means to combat poverty and economic hardships in the homeland, and as a way to help support household members left at home.

The role of discrimination on female remitting behaviour is ambiguous ($\uparrow\downarrow$). Of course, it can imply higher economic and psychological migration costs but the total effect is not straightforward. On one hand, there can be an income effect (\downarrow) due to an unequal access to the labor market or the so called 'brain waste'. In other words, women may remit less than men because of a lower disposable income. On the other hand, there can be a time effect (\uparrow). Indeed, women remit more because the time spent in the destination country decreases as a consequence of heavy workloads with long working hours, limited training facilities, poor career development as well as recorded abuses. Thirdly, the two effects can be jointly present. In a micro setting where the market discrimination against women migrants is taken into account, Gorodzeisky and Semyonoy (2006) show that the net effect of gender on earnings seems to have a cumulative effect on the differential ability of men and women to remit. According to them, about 70 percent of the gender gap in remittances may be viewed as net effect of gender. Yet only 25 percent of this gap is attributed to earnings differentials between men and women. Apparently, net earnings disparities between men and women (after adjustment for living expenses) are considerably larger than the gross earnings gap. Still on Filipinas migrants underemployment, Cortes (2010) find that migrant mothers send significantly fewer remittances than Filipino fathers. This is due to most female migrants working in relatively low remunerated occupations such as domestic workers.

1.2 Female altruism

Another factor that can influence female remitting behaviour is whether women are more altruistic than men. For a general viewpoint, many articles review preference differences across gender analysing whether men and women exhibit different social preferences when others' payoffs (or utilities) enter into their utility function. Becker (1974) and Andreoni (1989) modelled first social preferences in the form of altruism but without going into gender's differences. Then a large body of works has realised how the extent and the form of the social preferences may also differ across the genders (Croson and Gneezy, 2009). However, many of the results are contradictory. In some experiments, women are more altruistic than men, and in others they are less so. Psychologists assess that the cause of these conflicting results is that women are more sensitive to cues in the experimental context than men (Kahn, Hottel and Davis, 1971). Andreoni and Vesterlund (2001) take

a new look at gender and altruism by asking how male and female ‘demands for altruism’ may differ. Performing a modified dictator game in which income and price vary, they find that when it is relatively expensive to give, women are more generous than men; however, as the price of giving decreases, men begin to give more than women. In sum, the question ‘which is the fair sex’ has a complicated answer since depending on the price, either sex may be seen as more fair.

Croson and Gneezy (2009) state that a way to organize properly the above discussion should be a simple empirical model *à la* List (2006) where the outcome of interest (social preference behaviour) depends on a vector of person specific variables (including gender), a binary treatment variable and an error component, as follows:

$$Y = X\beta + \tau T + \eta \tag{1}$$

Economists are interested in this kind of analysis since such gender differences may influence views on many issues such as charitable deduction, intergenerational transfers, or the allocations among spouses resulting from household bargaining. In particular, economists dealing with international migration, are involved too since it is often found that female migrants send more (less) remittances than men as a consequence of their more (less) altruism.

Along to these studies, Chant and Radcliffe (1992) argue that women attach more importance to the family than men do, or face greater expectations to fulfill obligations within the general framework of kinship. Hence, despite their relatively low earnings, female migrants are often more reliable sources of remittances than male migrants (Rodenburg, 1993). Using survey data for Bangkok Metropolis, Phongpaichit (1993) shows that the proportion of female migrants sending remittances was higher than that of males, and female migrants were likely to send remittances more frequently than male migrants. She argues that this was because most of these female migrants were single and tended to have stronger ties with their families of origin than the men did. On the same wavelength, Vanwey (2004) concludes from his data that women may be more likely to follow the altruistic model and his results show that women respond more strongly to the needs of their household of birth. Curran (1995, 1996) looks at children who remit in Thailand and the role that birth order plays, finding that daughters and especially middle daughters tend to remit the most while middle sons remit the least. Moreover, within rural Philipino households younger women members are preferred migrants because they are more likely to remit from their earnings (Lauby and Stark 1988). Based on data from rural Mexico, De La Cruz (1995) also found that women remit to insure and assist their

family/siblings; while men remit to invest. Ahmed (2000) confirms that closer sender-recipient family relationships are associated with greater remittances for Somali women where the pattern of migrant wives supporting their husbands is on the rise. De la Briere et al. (2002) examine migration from the Dominican Sierra and look at the determinants of contractual behavior by developing two models for insurance and investment motives. They find that migrant behavior differs based on gender and destination. Female migrants to the United States provide remittances as part of an insurance contract with the origin household, while both male and female U.S. migrants remit in anticipation of a future bequest. Already in previous research De la Briere (1997) finds that women tend to maintain more regular contacts, e.g., they visit home more often than men with resulting remittance differences. Finally, Orozco, Lowell and Schneider (2006) explicitly assess gender and remittances with random surveys of formal remittance senders from 18 different countries (Latin America, the Caribbean, and West Africa) and residing in the United States, Germany, and the United Kingdom. Firstly, the findings indicate that women remit lesser amounts of monies than men and this characterizes women from most countries. Secondly, women remit more monies than men to distant family members including siblings and others, while men increase the amount of their remittances only when sending to their spouse. Thirdly, both men and women remit more the longer they have been sending remittances (with a decay function), but women remit yet more than men over time.

2 Macro data

To examine the relationship between remittances and female migrants, we use a new comprehensive bilateral data set contained in Docquier, Rapoport and Salomone (2012)(henceforth DRS, 2012) documenting the amount of remittances sent by transferring country j to recipient country i at time t (denoted by R_{ijt}), and the size and structure of bilateral migration stocks from origin country i to destination country j . We denote by M_{ijt}^g the stock of migrants with gender g .

2.1 Bilateral remittances

The DRS bilateral data set combines five existing bilateral databases constructed by other authors or organizations: the EU data as documented in a report of Jimenez-Martin, Jorgensen and Labeaga (2007); the IMF database from Lueth and Ruiz-Arranz (2008); the Romanian one by De Sousa and Duval (2010); IDB one built by the Inter-American Development Bank and the ECB database as in Schioupou and Siegfried (2006). The

merging procedure, as described at length in Artuç et al. (2015), prevents from possible self selection issues and gives rise to a data set going from 1985 to 2005 in which 8928 observations for 1348 country pairs are available⁶.

2.2 Bilateral migration data

Migration data are taken from Artuç et al. (2015) who construct 195x195 matrices of bilateral migration stocks for 1990 and 2000. The matrices are computed for two skill groups: migrants with college (tertiary) education, referred to as high-skill, and with less than college education (primary and secondary), referred to as low-skill. The methodology used in Docquier et al. (2010) consists of three steps. The starting point is the database described in Docquier, Lowell and Marfouk (2009) documenting bilateral migration stock to OECD host countries. It is based on a collection of census and register immigration data by country of birth and educational level in the 30 OECD countries. The second step consists of a collection of similar immigration data from 46 non-OECD destinations in 2000 and 31 destinations in 1990. Finally, data collected in steps 1 and 2 are used to predict the size and structure of migration to the remaining 119 non-OECD host countries in 2000 (and 134 in 1990). Gravity regression models were estimated for the size of bilateral migration from country i to country j in the education group k . The latter constructed data will not be used in our empirical analysis, which only builds on primary census data.

3 Empirics

3.1 Basic specification

The basic regression model follows DRS(2012) using the bilateral female ratio instead of the bilateral skill ratio of the diaspora. The bilateral female share in the migrant population aged 25+ is measured as the share of total female migrants over total migrants plus ϵ in order to control for corridors with zero migration. Our empirical model writes as follows:

$$\begin{aligned} \ln R_{ijdt} = & \eta_i + \eta_j + \eta_d + \eta_t + \alpha_0 + \alpha_1 \ln M_{ijt}^{s+u} + \alpha_2 F_{ijt} \\ & + \alpha_3 \ln D_{ij} + \alpha_4 L_{ij} + \alpha_5 C_{ij} + \alpha_6 Y_{it} + \alpha_7 Y_{jt} + \alpha_8 y_{it} + \alpha_9 y_{jt} + \epsilon_{ijt} \end{aligned} \quad (2)$$

where $\ln R_{ijdt}$ measures total remittances in US dollars in logs from transferring (i.e. immigration) country j to recipient (i.e. emigration) country i at time t in data set d ,

⁶For the complete list of sending and receiving remittances countries see Docquier et al., 2012.

$\ln M_{ijt}^{s+u}$ is the log of the bilateral migration stock from i to j and F_{ijt} is the share of females over total bilateral migration, and $\ln D_{ij}$, L_{ij} and C_{ij} are three bilateral variables accounting for geographical, linguistic and cultural distances. Origin, destination, time and database fixed effects are included. We also control for nominal GDP at origin and destination (Y_{it} and Y_{jt}) and GDP per capita (y_{it} and y_{jt}).

The estimation of the equation (2) entails various econometric issues⁷ that may lead the OLS estimation to generate inconsistent estimates. Moreover, there is a large proportion of zeros for the dependent variable (bilateral remittances) due to the fact that we constructed our comprehensive database on remittances to make it as balanced as possible, as extensively discussed in Docquier et al. (2012).

To the best of our knowledge, the most appropriate way to estimate the above model is the Poisson regression by pseudomaximum likelihood. The new command PPML in Stata differs from the old one called `poisson` because it uses the method of Santos Silva and Tenreyro (2010) to identify and drop regressors that may cause the nonexistence of the (pseudo-) maximum likelihood estimates. All the PPML models are estimated by default with robust standard errors.

Table 1 reports estimation results for the base specification. The share of females at destination is always positive and significant even when controlling for the educational level of the diaspora or the other gender. A nonlinear model such as the Poisson one raises an issue of interpretation of the slope coefficients. Given the exponential function form of the conditional mean, it means for example that a one unit increase in female share in the migration diaspora leads to a 11% increase in annual remittances.

⁷Among others, there can be an endogeneity issue due to the relationship between remittances and female migration. In the micro literature the presence of an implicit family loan arrangement can hide circular family migration due to remittances (see Poirine, B. (1997): A Theory of Remittances as an Implicit Family Loan Arrangement, *World Development*, Vol. 25, N.4, 589-611) and this can imply that the intention to remit is endogenous.

Table 1: Basic model Poisson estimations

	PPML Rijdt (1)	PPML Rijdt (2)	PPML Rijdt (3)	PPML Rijdt (4)	PPML Rijdt (5)	PPML Rijdt (6)	PPML Rijdt (7)	PPML Rijdt (8)
Stock of Migrants at dest. (log)	0.739*** (0.029)	0.739*** (0.029)	0.761*** (0.030)	0.743*** (0.029)	0.733*** (0.031)	0.768*** (0.031)	0.760*** (0.032)	0.746*** (0.032)
Share of Females at dest.	0.1127*** (0.035)						0.1093*** (0.035)	0.636 (0.428)
Share of Males at dest.		-0.1351*** (0.036)						
Share of skilled females at dest.			0.2140*** (0.058)					0.1596*** (0.061)
Share of unskilled females at dest.				0.575 (0.357)				
Share of skilled males at dest.					-0.828 (0.589)			-0.214 (0.649)
Share of unskilled males at dest.						-0.1392*** (0.406)		
Share of skilled people at dest.							0.0759* (0.454)	
GDP per capita at or. (log)	-0.533* (0.274)	-0.533* (0.274)	-0.536* (0.274)	-0.530* (0.275)	-0.540* (0.277)		-0.525* (0.273)	-0.539** (0.274)
GDP per capita at dest. (log)						1.613*** (0.317)		
GDP at origin (log)	1.071 (0.740)	1.102 (0.738)	1.158 (0.751)	0.939 (0.749)	0.977 (0.760)		1.111 (0.739)	1.194 (0.744)
GDP at dest. (log)	1.521*** (0.317)	1.521*** (0.317)	1.478*** (0.319)	1.541*** (0.314)	1.515*** (0.313)		1.518*** (0.319)	1.480*** (0.316)
Distance (log)	-0.00802 (0.0167)	-0.00648 (0.0167)	-0.0184 (0.0165)	-0.0119 (0.0165)	-0.0180 (0.0170)		-0.00837 (0.0164)	-0.0134 (0.0163)
Common language (dummy)	0.417*** (0.159)	0.400** (0.160)	0.268 (0.171)	0.521*** (0.156)	0.500*** (0.155)		0.389** (0.173)	0.281 (0.172)
Colony (dummy)	0.808*** (0.168)	0.824*** (0.169)	0.767*** (0.170)	0.740*** (0.163)	0.714*** (0.165)		0.813*** (0.168)	0.814*** (0.169)
Constant	-39.43** (16.47)	-38.87** (16.44)	-41.04** (16.71)	-36.33** (16.64)	-36.47** (16.81)		-40.81** (16.43)	-41.89** (16.56)
Origin FE	yes	yes	yes	yes	yes	yes	yes	yes
Destination FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes
Database FE	yes	yes	yes	yes	yes	yes	yes	yes
Observations	8,888	8,888	8,888	8,888	8,898	8,888	8,888	8,888

* Significant at the 10% level ** 5% level *** 1% level

Robust standard errors clustered by country in parentheses below the estimates.

3.2 Discrimination interactions

The first best in order to empirically test whether female remitting behaviour is affected by discrimination in the destination country would be to use data on female migrants' discrimination as in the micro study on Filipinas' labor discrimination by Gorodzeisky and Semyonoy (2006). Unfortunately, at macro level, data on migrants' gender discrimination are not available. The only exception is the European Community Labour Force Survey by Eurostat (ELF henceforth) from which country data for 23 OECD countries can be collected as in the studies by Dumont and Liebig (2005) and Rubin et al. (2008). The ELF contains, among others, micro data on employment and unemployment gender and education disaggregated data for foreigners from either OECD and non OECD countries. Starting from the initial dataset, macro indicators of employment, unemployment, underemployment and labor segregation can be obtained for male and female foreigners residing in 23 OECD countries. However, our destination countries' subsample is made up of 54 countries so relying just on the ELF would better proxy female migrants' labor discrimination but narrowing our empirical analysis. The second best solution would be indeed using gender disaggregated data on total (among both natives and foreigners) discrimination in the destination country, presumably assuming that attitudes towards female natives are at least as discriminatory as those towards female foreigners. Not surprisingly, it has been shown that gender and racial discrimination are interlinked and mutually reinforcing trends (UN, 2000), and that there is a high correlation between attitudes toward female native workers and female foreign ones (see the US case in Hegewisch et al., 2011). Indeed, since because of the above cited female migrants' double discrimination, female migrants should suffer at least the same discrimination as female natives. So, if our presumption holds, our results should just underestimate discrimination against female immigrants if discrimination against the fact of being 'a migrant' is neglected.

At present, the best source of gender discrimination macro data is the Cingranelli and Richards' (2009) Human Rights Database (CIRI henceforth)⁸, where gender disaggregated economic and social rights are contained. The data are coded on the basis of the United States State Department's Country Reports on Human Rights Practices, which contain

⁸The CIRI dataset is also utilized by specialized agencies monitoring the progress of women (UNIFEM, 2008). While it is impossible to assess the validity of the codings given there is no equally comprehensive competing dataset and it is impossible to know the true state of women's rights across the world, it is encouraging to note that Cingranelli and Richards (2009) provide their coders with very detailed information on how to code the rights, on where to find definitions on potentially unfamiliar terms, and on how to code with limited information available. They also provide coders with detailed narratives in justification for how selected country year examples should be coded. Moreover, each data point is coded by two trained coders for purposes of quality control and the inter-code reliability statistics is very high, as described in Cingranelli and Richards (2010).

information on how women are treated in every country. They do not merely rely on rights in formal laws since rights on the books may not match rights in practice. However, UNIFEM (2008) reports that a measure of gender empowerment (GEM) index constructed with the Cingranelli and Richards data corresponds quite closely to a measure of an enabling legal environment for gender empowerment (GEEE).⁹

In particular, three indicators related to female discrimination are going to be used: women's economic rights (WECON), women's political rights (WOPOL) and women's social rights (WOSOC). WECON includes a number of internationally recognized economic rights such as equal pay for equal work, free choice of employment and females' labor protection¹⁰. WOPOL refers to internationally recognized political rights as the right to vote, to run for political office, to hold government positions. WOSOC follows the former indicators but applying to rights such as the right to equal inheritance, to enter into marriage, to an education. Either WECON, WOPOL, and WOSOC code women's rights on an ordinal scale from 0 to 3 in the following manner:

- (0) There are no economic (social) rights for women under law and systematic discrimination based on sex may be built into the law. The government tolerates a high level of discrimination against women.
- (1) There are some economic (social) rights for women under law. However, in practice, the government DOES NOT enforce the laws effectively or enforcement of laws is weak. The government tolerates a moderate level of discrimination against women.
- (2) There are some economic (social) rights for women under law. In practice, the government DOES enforce these laws effectively. However, the government still tolerates a low level of discrimination against women.
- (3) All or nearly all of women's economic (social) rights are guaranteed by law. In practice, the government fully and vigorously enforces these laws. The government tolerates none or almost no discrimination against women

Finally, a fourth indicator called FORMOV (Freedom of foreign movement) has been used in order to control for citizens' freedom to leave and return to their country. The rationale relates to commonly accepted negative relationship between return plans and amount of

⁹For a detailed description of coding rules and for how ambiguous cases are treated, see Cingranelli and Richards (2008).

¹⁰Just considering the statistical correlation between WECON and employment and unemployment data from the Eurostat ELF, the former is equal to 0,4 and the latter to 0,7.

remittances sent back home (Dustmann and Mestres, 2011). This indicator goes from 0 to 2, depending how much freedom of movement is restricted. Column 1 shows that the interaction term made up of FORMOV and the amount of remittances is positive and significant, meaning the higher the possibility for people to come back home the higher the amount of remittances sent home.

Column 2 to 4 refer instead to gender discrimination's interactions. Except for WOSOC¹¹, either WECON and WOPOL, when interacted with the share of females in the migration diaspora, are negative and significant meaning that higher level of discrimination lead to higher amounts of remittances and viceversa. Two interpretations can be provided on this regard. First, a less discriminatory environment can make women extend their stay abroad and this usually implies a lesser amount remitted (see Dustmann and Mestres, 2011). Or secondly, that the Andreoni and Vesterlund (2001)'s hypothesis¹² is confirmed. In other terms, as discrimination increases females do remit more. This conclusion has also found to be true by Abrego (2009) who finds that even though Salvadoran immigrant mothers are structurally more disadvantaged than immigrant fathers, mother-away families are often thriving economically because of mothers' extreme sacrifices.

For the interpretation of the interaction terms, the partial effect of discrimination on remittances can be calculated as follows. The mean value of the female share of the diaspora is 0.377, so at the mean of the share of women migrants at destination, the effect of economic discrimination is $0.032 - 0.583(0.377)$ which is equal to -0.11. Then for the effect of political discrimination is -0.05.

¹¹This variable has been retired as of 2005

¹²It states that when it is more expensive to give, females do remit more.

Table 2: Discrimination interaction Poisson estimations

	PPML Rijdt (1)	PPML Rijdt (2)	PPML Rijdt (3)	PPML Rijdt (4)
Stock of Migrants at dest.(log)	0.624*** (0.0582)	0.734*** (0.0294)	0.741*** (0.0296)	0.724*** (0.0334)
<i>Share of Females at dest.</i>	0.1171*** (0.036)	0.2201*** (0.061)	0.3234*** (0.098)	0.1310** (0.066)
Freedom of foreign movement at dest.(FORMOV)	-0.504 (0.366)			
Diaspora at dest.*FORMOV	0.0696** (0.0310)			
Women's econ. Rights at dest. (WECON)		0.0326 (0.156)		
Share of Females at dest.*WECON		-0.583** (0.291)		
Women's pol.rights at dest.(WOPOL)			0.339* (0.194)	
Share of Females at dest.*WOPOL			-1.013** (0.448)	
Women's social rights at dest. (WOSOC)				0.0687 (0.160)
Share of Females at dest.*WOSOC				-0.00631 (0.243)
GDP at origin (log.)	1.423* (0.755)	1.076 (0.740)	0.921 (0.759)	0.859 (0.822)
GDP at dest. (log.)	1.385*** (0.318)	1.516*** (0.312)	1.507*** (0.319)	1.360*** (0.363)
GDP per capita at origin (log.)	-0.494* (0.271)	-0.628** (0.282)	-0.538* (0.276)	-0.723** (0.356)
Distance (log.)	-0.00549 (0.0169)	-0.00671 (0.0164)	-0.00816 (0.0168)	0.00348 (0.0185)
Common language	0.381** (0.162)	0.421*** (0.160)	0.400** (0.159)	0.321** (0.162)
Colonial links	0.765*** (0.165)	0.790*** (0.169)	0.820*** (0.169)	0.935*** (0.197)
Constant	-45.22*** (16.70)	-40.01** (16.45)	-36.75** (16.82)	-34.08* (18.27)
Origin FE	yes	yes	yes	yes
Destination FE	yes	yes	yes	yes
Database FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Observations	8,487	8,415	8,417	6,809
R-squared	0.927	0.929	0.924	0.932

* Significant at the 10% level ** 5% level *** 1% level

Robust standard errors clustered by country in parentheses below the estimates.

4 Conclusion

At present, there is no consensus on the role of gender on remittances. On one hand, women would remit less because of disadvantaged labor market conditions (Cortes, 2011), discrimination (Gorodzeisky and Semyonoy, 2006) and family reunifications (Holst, Schafer and Schrooten, 2012). Inversely, females would remit more both overall and as a percentage of income because they tend to maintain stronger networks with their restricted and extended family (Tacoli, 1999; Richter and Havanon, 1995; Pongpaichit, 1993; Chant and Radcliffe, 1992) and because their remitting behaviour is driven more by altruism (Orozco, Lowell and Schneider, 2006).

After having provided some evidence that women do remit more (even after controlling by education), this paper shows that gender discrimination can foster remittances through increasing return migration plans.

The policy implications can be of some importance especially in terms of country/household compensation due to parental absence. A temporary migration experience by women can lead to higher remittances at home and lower children's loneliness.

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