Remittances and Social Spending

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Abstract: Remittances are a significant source of foreign exchange for developing economies. As of yet however, no study has explicitly examined the relationship between remittances and social insurance in developing democracies. I argue that remittances, due to their compensation and insurance functions, will increase the general income level and economic security of recipients, thereby reducing their perceived income risk. Over time, this will dampen demand from recipients for government sponsored social insurance. Therefore, I expect increases in income remitted to an economy, via an electoral channel, to result in reduced levels of social welfare transfers at the macro-level. I test this argument with an error-correction model on a cross-national, time-series dataset on social spending, with a sample of 18 Latin American states, over the period 1990 to 2009. The results of the statistical tests provide strong support for this argument.

Keywords: Remittances, social security, social insurance, welfare, Latin America, error-correction
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I. Introduction

Between 1995 and 2011, remittances to developing world economies grew from US$55 billion to over US$372 billion, to exceed all overseas development assistance to the developing world, and all private debt and portfolio equity flows. For Latin America, remittances are a crucial source of foreign exchange and in 2011, US$62 billion was remitted to Latin American households. For countries such as El Salvador and Honduras, remittances have repeatedly comprised over 15 per cent of their annual GDP. Given the scale of these cross-border financial transfers, particularly relative to the size of the recipient economies, it is no surprise that the importance of remittances for the political economy of policy-making in the developing world is increasingly garnering attention.

In this paper, I explore the effect of income, remitted to family members from abroad, on social spending in Latin American democracies. I argue that remittances will ultimately result in reduced levels of social security and welfare expenditure across the region. The logic of this argument is straightforward. Remittances go directly into the hands of recipient families and they serve a function that is very similar to social welfare payments. They enable households to purchase basic necessities and they serve an important compensation and insurance function in response to negative income shocks. The repeated receipt of remittances will raise the general income level of recipients, and increase their economic security, thereby reducing their perceived income risk. In turn, this will alter the micro-level preferences of recipients. It will dampen the demand of remittance recipients in developing world economies for government sponsored social security and welfare transfers. If we understand social policy as largely determined by popular demand, in time, via an electoral channel, this will translate into a reduction in
social security and welfare expenditure at the macro-level. Therefore, all else equal, I expect an increase in remittances to a Latin American country to result in a reduction in social insurance and social assistance in that country.

This paper builds upon a small but growing literature concerned with the implications of remittances for government policy. This literature has highlighted the role of remittances in reducing poverty and improving access to public goods; affecting exchange rate regimes; shaping sovereign credit ratings; reducing government corruption; prolonging the tenure of autocratic leaders; and shaping overall levels of government expenditure. To the best of my knowledge, no study has yet to comparatively explore the effect of remittances on social security and welfare transfers in developing democracies.

This paper also has implications for the literature on social spending in emerging markets. This work has begun to explore how international integration might shape micro-level preferences and consequently, macro-level policy outcomes, but one of the central challenges of this literature continues to be the search for explanations for the rather surprising absence of demand for social security transfers in developing democracies with very high levels of inequality and indigence. The relationship between remittances, income levels, and the income risk of recipients, can go some way towards explaining this anomaly, at least in the Latin American case.

I proceed as follows. The first part of the paper discusses the variation in social spending in Latin America. The second section is concerned with remittances across the region, and presents the main argument of the paper. In the empirical section, I test this argument using an error-correction model on a sample of 18 Latin American countries between the years 1990 to 2009. The results of these estimations indicate that remittances have a substantive negative long-term effect on social security and welfare expenditure in Latin America. I subject the results of this empirical analysis to a series of robustness
tests and address endogeneity concerns by re-estimating the models with an instrumental variable. Finally, I explore the electoral effect of remittances, before concluding.

II. Social Spending in Latin America

Figure 1 plots the distribution of total social expenditure, comprising all social security and welfare spending; together with spending on health and education, for 18 Latin American countries, between 1990 and 2009. The thick black lines within each box represent the median, while all observations within the 25th and 75th percentiles are captured by the boxplot. The whiskers report outliers. The purpose of this graph is to highlight the variation in social spending across Latin America and across time. There are countries in the region, such as Uruguay and Brazil, where the average level of social spending has consistently remained well above 15 per cent of GDP. In contrast, in the Dominican Republic and Guatemala for example, average levels of social expenditure hover just above five per cent of GDP and in Colombia and Ecuador, we can observe notable within-country variation. The paucity of social transfers in these countries is rather puzzling, particularly when we consider their persistent levels of inequality.

[Insert Figure 1 Here]

Gallons of ink have been spilled in the quest to understand the heterogeneity of social spending across the advanced industrial democracies. Recently, the dramatic variation in social transfers across emerging economies has inspired investigation. Much of this literature has focused on the causal effect of external economic pressures, but as of yet, the relationship between remittances, a major external capital flow, and social spending has remained unexplored. In addition, we lack a coherent explanation for the apparent absence of micro-level demand for social transfers in many emerging markets.

The literature on welfare expenditure in the advanced industrial democracies stresses the importance of increased labor risk as a consequence of economic openness
and the importance of individual-level occupational risk in shaping micro-level preferences for social spending.\textsuperscript{18} Clearly rooted in this work, contemporary perspectives on social spending in developing economies highlight the importance of labor market insecurities as a result of economic liberalization and the concomitant volatility in channeling different types of government spending;\textsuperscript{19} the cleavage between workers who face high levels of economic insecurity and those who face lower levels of insecurity, and the power balance that exists between these two groups;\textsuperscript{20} the concentration of labor market risk among well-paid workers in sheltered sectors resulting from post-war development strategies;\textsuperscript{21} and the divergence in preferences for social transfers among different occupational categories.\textsuperscript{22}

In many respects, the argument I present here, that remittances will increase the aggregate income and economic security of those who receive them, thereby dampening long-term demand amongst this group for social welfare spending, is complimentary to these existing explanations. The central causal mechanism of my argument is similarly rooted in the manner in which international integration shapes micro-level risk and preferences and consequently, macro-level policy outcomes.\textsuperscript{23} Although remittances are by no means a one shot explanation for variation in social spending across Latin America, they can go some way towards tackling the unexplained heterogeneity in welfare regimes we can observe across the region, and the persistent absence of popular demand for social insurance in countries with high levels of inequality.\textsuperscript{24}

III. Remittances and Social Spending

Latin America is a major recipient of remittances. Over 5.2 per cent of the region’s population are migrants and in 2011, households in the region received 17 per cent of all income remitted to the developing world. In the same year, remittances to the region grew by 7.7 per cent.\textsuperscript{25} However, there remains significant variation in the amount
remitted to Latin America. The left-hand pane of Figure 2 displays the average volume of remittances and FDI received, as a percentage of GDP, over the period 1990-2009, for eighteen Latin American countries. The right-hand pane displays the percentage of respondents, by country, who stated that they or someone in their family, received remittances during the 2010 wave of the LAPOP survey.26

For some countries, these financial transfers are an extremely important source of capital. In El Salvador, Ecuador, Guatemala, Honduras, Nicaragua and the Dominican Republic, the average amount of remittances received between 1990 and 2009 exceeded the average inflow of foreign investment, and in some cases, for example El Salvador, rather substantially. The coverage of remittances is also rather remarkable, particularly for the Dominican Republic, Nicaragua and El Salvador, where over 20 per cent of households receive remittance payments. In Argentina, Brazil, Chile, Uruguay and Venezuela on the other hand, remittances are rather small, but nonetheless, the data suggests that for some Latin American economies, remittances are a more important capital flow than foreign investment.

Given the scale of these financial transfers, it is no surprise that remittances exert independent political, economic and social effects. There is now a large literature highlighting the role of remittances in reducing poverty, illiteracy and income mortality, and improving access to education and public goods.27 Remittances, depending on the investment horizons of those receiving them, will also shape a country’s economic growth.28 David Singer has argued that large flows of remittances, by protecting householders against negative income shocks, will increase the likelihood that policymakers in developing world states will adopt a fixed exchange rate.29 Remitted income may also reduce the dependence of receiving groups on state patronage, thereby disrupting traditional clientelistic networks, while Tyburski has demonstrated that
remittance flows can mitigate government corruption in Mexico by increasing public accountability and therefore the incentives to reform.\textsuperscript{30} Faisal Ahmed has argued that governments within more autocratic polities can strategically channel remittances, together with foreign aid, in order to prolong their tenure in office.\textsuperscript{31}

There are also a handful of studies, which suggest that remittances may exert an effect on government spending. For Chaudhry, remittances have acted as a substitute for social welfare programs in Yemen.\textsuperscript{32} For Ahmed, remittances allow autocratic governments, due to the small size of their winning coalitions, to divert spending away from the provision of welfare goods and towards patronage.\textsuperscript{33} Singer on the other hand, contends that remittances will increase the overall size of the public sector, by facilitating increased government taxation and borrowing.\textsuperscript{34} The effect of remittances on social security and welfare spending in developing democracies remains unexplored.

By social security and welfare transfers, I refer to all expenditure on contributory social insurance and social assistance. In general, social insurance (against old age, disability, illness and unemployment) absorbs more than fifty per cent of all public spending across the region, and directly concerns who gets what, when and how. Social assistance in contrast, comprises revenue-funded cash transfers to indigent individuals, households and communities, although in general, these programs receive significantly less financial support.\textsuperscript{35}

I argue that remittances will reduce demand amongst recipients for government income transfers, which in turn, will translate into reduced social security and welfare spending. This effect operates through two complementary causal channels. Firstly, the functional utility of remittance payments for individual households in the developing world, serve a purpose that is remarkably similar to that of social security payments. In the short term, remittances generally provide income to families to purchase basic necessities such as food, utilities, shelter, some durable consumer goods, together with
expenditure on health.\textsuperscript{36} Therefore, remittances, like social security, prevent households from remaining mired in abject poverty by granting them a higher level of consumption.\textsuperscript{37}

Remittances also serve an important insurance and compensation function. Income remitted to family members in a migrant’s home country increases significantly when that country suffers a macroeconomic shock.\textsuperscript{38} In fact, remittances serve to increase the stability of the domestic economy and a number of studies have demonstrated that they reduce output volatility.\textsuperscript{39} So, just as social security can compensate those deleteriously affected by liberalization, during economic downturns, migrants will send more money back to family members in order to compensate them for any loss of income.\textsuperscript{40}

For example, Yang and Choi have demonstrated the insurance function of remittances in the Philippines in response to contractions in income. Over 60 per cent of the decline in household income as a consequence of economic shocks was replaced by remittances.\textsuperscript{41} In Mexico, evidence suggests that remittances, on average, reduce household income volatility, and increases in income risk in Mexico significantly raised both the propensity and the proportion of income remitted to family members.\textsuperscript{42} Remittances significantly increase the economic security, and reduce the perceived income risk, of recipients.\textsuperscript{43} Over time, and with the repeated receipt of remittance payments, demand from recipients for government-sponsored social insurance will therefore dissipate.

Concurrent with this process is the causal effect remittances have on preferences for redistribution via income levels. Remittances increase the general household income of recipients, and given that redistributive programs will most likely be funded by proportional taxation, individuals with higher income tend to oppose government social transfers, both because of the effect on their income and the absence of personal utility
from expanded social spending. What is more, voters support redistribution, based not only on their current income, but also their expected future income. Prospects of upward social mobility can render individuals more averse to redistribution than they otherwise would be. It is reasonable to assume that those who begin receiving remittances from abroad on a regular basis will have expectations of higher future income, and consequently, expectations of upward social mobility.

The end result of these complementary causal processes is that remittance recipients are likely to support political parties and candidates that favor less redistribution (and lower taxes). This will translate into a reduction in the provision of social spending at the macro level.

An examination of cross-sectional public opinion data for Latin America appears to support the assertion that those who receive remittances have less support for government income transfers in comparison to those who do not receive such payments. Figure 3 captures the disjuncture in attitudes towards income equality and redistribution amongst those who receive remittances, and those who do not. The left hand pane depicts the results of a logistic regression based on data from the 2009 wave of the Latinobarómetro public opinion survey, examining the effect of remittances on individual preferences towards redistribution, controlling for demographic differences, income levels and political preferences.

The dependent variable in this model captures whether an individual believes the income distribution in their country to be fair (1) or unfair (0). Remittances, the central explanatory variable, is also a dichotomous variable, and represents respondents who received some form of remittances (1) and those who did not receive any remitted income (0). This graphs displays the odd ratios for each variable from this logit model. The lines on either side of the odd ratios represent 95 per cent confidence intervals, and where they cross the vertical line, the relationship between this variable and the
dependent variable is not statistically significant.

Those who receive remittances are more likely to perceive the income distribution in their country to be fair, in comparison to those who do not receive any remittance payments. For example, holding all other variables at their mean, the probability of remittance recipients stating that the income distribution within their country is fair is 27 per cent, in comparison to 20 per cent of respondents who do not receive any remitted income whatsoever.

The right-hand pane of Figure 3 is based on an identical logit model, except on this occasion, remittances is an ordinal variable ranging from 1 (where a respondent receives no remittances) to 5 (where a respondent receives remittances at least once a month). Each point represents the predicted probability, together with 95 per cent confidence intervals, of respondents perceiving the distribution of income in their country to be fair, disaggregated by the frequency they receive remittance payments. We can observe the disjuncture in attitudes, amongst those who receive remittances on a regular basis and those who do not, towards redistribution. For example, there is a 31 per cent probability that respondents who receive remittances once a month will state that the distribution of income within their country is fair, in comparison to 25 per cent of respondents who receive payments once every six months, and just 20 per cent for respondents who do not receive any remitted income.

So, remittances will reduce the income risk and economic insecurity of recipient families, and raise their general household income. This will temper demand amongst recipients for government-sponsored social spending. Therefore, all else being equal, the greater the volume of remittances that flow into a country, the larger the coalition with reduced demand for social security transfers, which in time, will translate into reduced social security and welfare expenditure. Reduced income risk at the micro-level will
ultimately result in reduced social welfare spending at the macro level.\textsuperscript{47}

It is important to differentiate between the provision of enduring public goods versus government income transfers. While remitted income may serve as a private insurance mechanism and thus temper demand for government social insurance, I do not expect remittances to have a similar effect on other types of social spending, such as health or education expenditure. Education and health are enduring public goods, and it is most likely that a different causal mechanism is at play here. Remittances empower recipients to hold governments more accountable and consequently, they may result in increased health and education expenditures, as a more politically active citizenry demand these public goods.\textsuperscript{48}

The argument that I present here complements the existing literature on remittances and policy outcomes in a number of ways. Firstly, remittances may increase the overall size of the public sector, but still induce downward changes in specific types of spending. Indeed, Singer’s empirical analysis was ‘agnostic as to the influence of remittances on the composition of spending,’ and his dependent variable was total government consumption expenditure as a percentage of GDP.\textsuperscript{49} In this regard, it is important to disaggregate government expenditure, in order to understand the different channels through which remittances might operate. Increases in overall public expenditure may be a product of increased health or education spending, or investment in infrastructure, or even clientelistic spending.

In addition, Ahmed has argued that in autocracies, remittances result in reduced government provision of subsidies and welfare goods, and increased patronage.\textsuperscript{50} I argue that remittances will result in reduced social welfare transfers in democratic states also, but this effect will operate through a different causal mechanism. For Ahmed, remittances are a source of unearned foreign income for governments, and the substitution effect of remittances is driven by government calculations to reduce welfare spending and increase
patronage. Of course, democratic leaders may also use remittances to substitute for social spending, and use the saved income to establish clientelistic linkages with the electorate. Remittances however, will increase the general household income and social mobility of recipients, and recent work suggests that parties who engage in clientelistic linages actually lose electoral support among non-poor constituents in Latin American democracies. In democracies, we must understand social policy to be largely determined by popular demand. The causal mechanism presented in this paper is rooted in changes in income, and income risk, at the micro level, which subsequently translates into reduced spending at the macro level via an electoral channel. As Singer notes, remittances do not go directly to the government and so any effect they exert on policy must be through the activities of those that receive them.

IV. Empirical Analysis
In order to test this argument, I explore the relationship between remittances and social spending using an unbalanced panel of 18 Latin American countries, between the years 1990 to 2009.

VARIABLES
The dependent variable in this sample is the volume of government social spending in country $i$ at time $t$. The central variable of interest is social security and welfare expenditure as a percentage of GDP. This figure includes all spending on social security, social assistance and welfare, officially reported by each state. There are some issues with this measure. For example, in the Mexican case, due to the decentralization of welfare transfers, the amount spent on social security and welfare is underreported. There are also issues with the progressivity of this spending. In general however, income transfers are broadly considered progressive, and over 55 per cent of all welfare spending across
the region reaches the poorest 40 per cent of the population. In addition, I also include all spending on health and education as a percentage of GDP. This data is taken from the Comisión Económica para América Latina y el Caribe (CEPAL) and covers the years between 1990 and 2009. As discussed earlier in the paper, there is substantial variation in the level of social security and welfare spending across the panel.

I contend that remittances will result in lower levels of social security and welfare spending. The central explanatory variable, remitted income, is simply total inward remittances as a percentage of GDP, and is taken from the World Bank Development Indicators. This variable is comprised of all current private transfers from migrants, resident in their host country for more than one year, to recipients in their country of origin; all migrant transfers to the country of origin at the time of migration; and compensation of migrants who have lived in the host country for less than a year (Some caveats. Firstly, this measure only represents the recorded official inward flow of remittances, and does not capture unofficial flows of remitted income. Secondly, the increase in recorded remittances over time, may be a product of migrants moving from unofficial to official channels in order to remit their income, as opposed to increases in the actual level of remittances.

Simple descriptive statistics appear to lend credence to the general argument. The mean level of social security and welfare spending (CEPAL 1990-2009) for all observations in the sample below the mean level of remittances is 4.95 per cent of GDP. For all observations in the sample, above the mean level of remittances, the mean level of social spending is 3.4 per cent of GDP.

In addition to the central explanatory variable, the level of remittances, I also include a range of political, economic and demographic controls that have become standard in studies on social spending in developing democracies. Firstly, to capture exogenous economic flows and the pressure on social spending that they may exert, I
include the standard measure of trade, which is imports plus exports as a percentage of GDP together with capital openness, which represents the extent of a state’s financial integration. This variable is taken from Chinn and Ito’s index of capital account openness and is based on information from the IMF’s *Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER)*. Both trade and capital openness are positively correlated with remittances, but only weakly so. For example, Costa Rica has high levels of trade integration but low levels of remittances, while Chile has high levels of capital openness but very low levels of remittance payments. Alternatively, El Salvador has very high levels of remittance inflows, but relatively low levels of trade integration. Neither trade integration or capital openness appears to be driving remittance inflows.

Secondly, I control for the ideological orientation of the government in power. *Left government* is a dummy variable that takes the value of 1 when the government in power is of the left, and zero when the government is of the center or right. Between 1990 and 2003, this ideological score was based on Coppedge’s expert survey of Latin American party positions, together with the updated temporal scores of Grigore Pop-Eleches. After 2003, this was taken from the expert survey data of Wiesehomeier and Benoit. In the few cases where data was missing, I take the ideological score from the Voter-Revealed Leftism (VRL) dataset of Baker and Greene.

The state of the domestic economy is represented by GDP per capita (logged) and inflation, the logged annual percentage change in consumer prices. As a demographic control, I include the dependency ratio, measured as the percentage of a country’s population over 64 years of age and younger than 15. This is a common control in cross-national studies of social spending. The economic and demographic variables are taken from the World Bank Development Indicators.
Finally, although all countries in the sample are democratic, I follow Singer and control for the level of democracy in country $i$ at time $t$. This measure is taken from the Polity IV database.

MODEL SPECIFICATION

I employ an error-correction model (ECM) for the statistical analysis. This type of model has a number of advantages over more standard time-series cross-sectional designs. Standard regression models are limited to levels of explanatory variables, together with short-run effects and static interpretation. In contrast, the ECM is based on the acknowledgement that the dynamics of an explanatory variable may be different over the short and long-term, and so the ECM allows for the interpretation of both the long run and transitory effects of the independent variables on the dependent variable. In this instance, this model is particularly useful. The obvious alternative explanation to my thesis is that the relationship between remittances and social spending is a product of state capacity. That is, those countries that never had the capacity to establish large social programs experienced higher migration and consequently greater inflows of remittances. The ECM can deal with this alternative explanation as it allows us to examine the effect of changes in an explanatory variable on changes in an outcome variable. In the present context, we can examine the longitudinal effect that changes in remittance flows may have on changes in social spending. So, we are not simply ascertaining if there is a relationship between levels of variables.

Secondly, there may be a concern that remittances will increase in response to reduced levels of social insurance. Again, the ECM is particularly useful in this regard, as it is also suitable for weakly exogenous regressors and nonstationary dependent variables. The ECM has also been employed in other studies of government spending. It takes the following form:
\[ \Delta(SocialSpending_{it}) = \beta_0 + \beta_1(SocialSpending_{it-1}) + \beta_2(Remit\ tan\ ces_{it-1}) \\
+ \beta_3(\Delta Remit\ tan\ ces_{it}) + \gamma\Delta X_{it} + \lambda X_{it-1} + \epsilon_{it} \]

The dependent variable is the annual change in the percentage of social spending in country \( i \) at time \( t \). \( \gamma \) is a vector of coefficients for the first-differenced controls, while \( \lambda \) is a vectors of coefficients for the lagged control variables. The coefficients for the first-differenced variables capture the short-term effects of a variable on the dependent variable, for example, the immediate effect of a once-off change in remittances on changes in government social spending.\(^{72}\)

More significantly, the ECM also returns the rate of equilibrium (\( \beta_{1} \)), that is, the effect of the first-differenced variables over time, or the rate at which \( Y_{i} \) changes to return to equilibrium after a change in \( X_{i} \).\(^{73}\) The coefficients for the lagged variables represent the effect of a once-off change on the dependent variable, spread across future time periods. The total effect of a once-off change in a variable, that is, all transitory and long-run effects combined, can be found by dividing the lagged coefficient of a variable by \( \beta_{1} \).\(^{74}\) This is known as the long-run multiplier (LRM). The standard errors for the LRM are calculated with the Bewley transformation.\(^{75}\) I estimate all models with country and year fixed-effects.

**MAIN RESULTS**

Table 1 presents the results from these estimations. Column 1 reports the results of the error-correction model with social security and welfare spending as the dependent variable. The results of this model indicate that remittances have a significant negative effect on the social security and welfare expenditure of Latin American governments. As we can see from this column, remitted income does not have any immediate impact on social welfare spending, given the statistically insignificant coefficient on \( \Delta Remittances \).
Rather, the effect of remittances on welfare transfers is spread across future time periods, as indicated by the statistically significant coefficient on the lagged remittance variable.

The long-run multiplier in Column 2 captures the total effect of remittances, comprised of all immediate and lagged effects, on social security and welfare expenditure in Latin America. The total combined impact of remittances on social security transfers is statistically significant at the .01 level and what is more, the size of this relationship is rather substantive. A one-percentage point increase in remittances will result in a reduction in social security and welfare spending of 0.15 per cent. A move from the 10th to the 90th percentile in the volume of income remitted to a Latin American country, a difference roughly equivalent to the amount of remittances received in Uruguay and the amount received in El Salvador, decreases government welfare spending by over 1.6 per cent. For example, in Mexico, where social welfare transfers account, on average, for approximately 1.7 per cent of GDP, in real terms this would equate to a reduction in total social spending of roughly US$268 million.76

Taken as a whole, these results demonstrate that remittances have a notable negative effect on social security and welfare expenditure. However, the effect of remittances on social transfers is not immediate. Rather, it occurs gradually over time. This is what we might expect, as an increase in income remitted to family members is unlikely to result in an immediate reduction in demand for safety-net income transfers amongst recipients. It will take time, and the repeated receipt of income, for the income of remittance recipients to rise, and for recipients to perceive that their income risk has diminished, and for this to translate into reduced demand for social spending.77

These findings are robust to a number of alternative specifications. Firstly, I re-estimated all of the models with an alternative measure of the dependent variable. This alternative measure of government social spending is taken from the Social Policy in
Latin America and the Caribbean Dataset, which covers the period between 1975 and 2000. Based on data from the IMF, again the central dependent variable is social security and welfare expenditure as a percentage of GDP, together with health and education spending as a percentage of GDP.\textsuperscript{78} This measure has been used in previous studies on social spending in Latin America.\textsuperscript{79} The results of the estimations with this alternative dependent variable can be found in Table C of the web-appendix. The results of the ECM with this alternative dependent variable are remarkably similar to those above. Once again, remittances do not have an immediate effect on social security and welfare expenditure. Rather, the negative effect of remittances on welfare transfers is spread across future time periods, as indicated by the statistical significance of the lagged remittance variable. The total effect of remittances on social welfare spending, as captured by the LRM in Column 2, is again statistically significant and substantively quite large. A one-percentage point increase in remittances has the effect of reducing social security and welfare expenditure by nearly 0.4 per cent.

Secondly, I re-ran the estimations as more standard time-series, cross sectional models. Table D in the web-appendix presents the results of alternative panel-corrected standard error models, which correct for first-order autoregression (left-hand pane) and include a lagged dependent variable (right-hand pane).\textsuperscript{80} Both estimations include country fixed-effects. Across both estimations, remittances have a negative and statistically significant effect on welfare spending. The other results remain largely similar.

Thirdly, I re-ran the ECM models without the cases of Uruguay (highest level of social spending) and El Salvador (highest level of remittances). I also performed a modified jackknife, whereby each country was removed from the model one at a time and the results re-estimated. I re-ran the models without fixed-effects and without year dummies, and I also accounted for a range of possible omitted variables, including IMF
lending; and the level of constraints on the executive. The core results remained unchanged.

INSTRUMENTAL VARIABLE ANALYSIS

Of course, migrants may alter the amount, and timing, of the money they send back home to family members in response to changes in the level of social spending in their country of origin. The ECM, as discussed above, can deal with weakly exogenous regressors and the alternative explanation of state capacity, but to further bolster the credibility of the results, I also employ an instrumental variable approach. The success of such an approach is predicated upon the selection of a suitable and valid instrument.

I employ the distance between the United States and each respective recipient country, weighted by the annual GDP of all other recipient countries. Weighting this measure by the GDP of all other remittance recipient countries in the region is an advance on instruments that include the GDP of the migrant receiving country. This measure will reflect systematic changes in the microeconomic determinants of remittances, but by excluding the GDP of the recipient country in question, it removes a direct causal link with domestic macroeconomic variables. We would expect the distance from the US to the recipient country, weighted by the GDP of all other remittance receiving countries, to affect the volume of remittances across Latin America, but not necessarily to affect levels of social spending in the recipient country. This instrument is also a very strong and statistically significant predictor of remittances. Of course, this variable may be affected by income growth in other parts of the region, and through trade links this could affect growth in the remittance receiving country. However, as Barajas et al. argue, the diversification effect will reduce the correlation between the instrument and the growth rate in the recipient country and in addition, including the growth of trading partners in the equation can control for any remaining trade effects.
Table 2 presents the results of the second stage of three separate, two-stage ordinary least squares models with this instrumental variable. The dependent variables are social security, health and education expenditure, respectively. For the social security and welfare expenditure model, the $F$-statistic for the instrument is 26, well above the suggested threshold of 10, confirming that this is a suitably strong instrument for remittances.\(^7\) In addition, the results of Hausman tests indicate that remittances are endogenous, and the two-stage model is appropriate.\(^8\) As recommended by Barajas et al., I also control for the growth of all other trading partners.\(^9\)

[Insert Table 2 here]

The instrumental variable analysis confirms the core empirical results. As can be seen from Table 2, the instrumented remittance variable is negatively signed and statistically significant at the 0.05 level for social security and welfare spending.\(^9\) It is negatively signed for health and education expenditure, but it only reaches levels of statistical significance, at the .1 level, for education spending. These models rely on lagged levels of the explanatory variables, but nonetheless, the results for the remaining control variables are very similar to the original estimations. The only notable difference concerns the level of democracy, which is positively signed and statistically significant in each model.

THE ELECTORAL CHANNEL

Given the prevalence of clientelism across Latin America, it is possible that the reduction in social transfers caused by remittances is a democratic manifestation of Ahmed’s causal mechanism, whereby democratic leaders allow remittances to substitute for social spending, and use the saved income to establish clientelistic linkages with the electorate.\(^9\) However, if my argument is correct, that remittances affect government social transfers via a bottom-up electoral channel, then, in countries that receive large amounts of
remitted income, we should be able to observe reduced support for left-leaning political parties and candidates who campaign on redistributive platforms.

Tables 3 and 4 therefore, provide further verification for the causal mechanism I propose. Column one presents the relationship between remittances and support for left-leaning candidates in presidential elections between 1992 and 2009. The dependent variable in this model is the measure of Voter-Revealed Leftism (VRL) developed by Andy Baker and Ken Greene. Formally, VRL can be expressed as:

$$ VRL_t = \sum_{i}^n \text{Ideology}_i \times \text{Voteshare}_i $$

Each presidential candidate in country $i$ at election time $t$ is assigned a score on a scale that runs from 1 (right) to 20 (left), based on the expert survey scores of Wiesehomeier and Benoit. Each ideology score is then multiplied by the vote share of the respective presidential candidate and subsequently, those products are summed. The higher this score, the higher the support for leftist positions in that particular country in a given year. The main explanatory variable, remittances, is simply the average amount of income, as a percentage of GDP, remitted to country $i$ in the three years preceding the election at time $t$.

Column two replicates the estimation for presidential elections, except in this model the dependent variable is the voter-revealed leftism of support for political parties in legislative elections across Latin America between 1993 and 2009. The flow of remittances, while controlling for socio-demographic, political and economic variables, has a negative and statistically significant effect on electoral support for left-leaning political parties in legislative elections and candidates in presidential elections, across the region and across time. This effect is substantial. For example, when the amount of income remitted to a country moves from the 10th to the 90th percentile, then VRL in presidential elections will decrease by 2.64. This is roughly akin to the difference in VRL.
between the 2002 presidential election in Bolivia that returned Gonzalo Sánchez de Lozada as president, and the election in 2005, which Evo Morales won. In the case of legislative elections in Latin America, this would result in a reduction in VRL of 2.34.

[Insert Table 3 here]

[Insert Table 4 here]

In a final step, I also examine the effect of remittances on support for left-leaning political parties at the micro-level. Table 4 presents a series of cross-sectional models, which are based on data from the 2009 wave of the Latinobarómetro survey. The dependent variable is based on each respondent’s answer to the question, “If elections were held this Sunday, which party would you vote for?” The political party named by each individual was awarded an ideology score based on Wiesehomeier and Benoit, ranging from a minimum of 2, representing the most right-leaning party named by a respondent to a maximum of 19, representing the most left-leaning party (mean of 10.37). Here, remittances is a dichotomous variable, whereby all recipients who stated they receive remittances at least once a month was coded as 1, and 0 otherwise.

Controlling for demographics, income and political attitudes, the regular receipt of remittances has a statistically significant and negative effect on electoral support for left-leaning political parties at the individual level. The difference between those who receive remittances on a regular basis, and those who do not, is an ideology score of approximately 1.1. At both the macro and micro-level, the flow of remittances to Latin American is causing a reduction in social security and welfare transfers, via an electoral channel, as remittance recipients withdraw support for candidates who favor redistribution.
V. Discussion and Conclusion

Remittances are an integral part of international capital flows, and for developing world economies they are a major source of foreign exchange. Contemporary remittance flows now dwarf all overseas development assistance and private debt and portfolio equity flows. Given the magnitude of these financial transfers, it is not surprising that an emerging literature has begun to highlight the importance of remittances for the political economy of policy-making.

In this paper, I examined the effect of remittances on social spending in Latin America. I argued that changes in remittances will cause a contraction in social security and welfare spending across Latin American democracies. Remittances are a stable cross-border financial flow, which serve an important compensation and insurance function for households in developing economies. The repeated receipt of remittances will bolster the income, and economic security of recipients and therefore reduce their income risk. Over time, this will alter the preferences of recipients for welfare transfers. It will dampen demand from this group for government sponsored social spending. This will translate into reduced support for political parties who advocate redistribution. The upshot is a reduction in government spending on welfare and social security. The results of a battery of statistical tests provided strong support for this argument.

These findings have a number of important implications. Firstly, the results presented in this paper have implications for the literature on social spending in the developing world and by linking remittances with income risk and the micro-level preferences of the electorate, it can also go some way towards explaining the heterogeneity in demand for social welfare and security across Latin America.

Secondly, and in line with a number of recent studies, they confirm the importance of accounting for remittances when considering the political economy of policy-making in the developing world. Clearly, remittances, given the scale of these
transfers, like investment and portfolio capital, foreign aid, and international trade, will generate incentives in the political system, which may alter the outcome of public policy. The policy areas that remittances effect, and the exact mechanism through which this occurs, remains a task for future research. For example, does the ideology of the government in power have an effect on how remittances affect policy? Given that recent evidence suggests that remittances may affect sovereign credit ratings, these flows must also affect the borrowing strategies of developing world governments.  

Thirdly, for the developing world more generally, and for Latin America in particular, the effect of remittances on public policy will have long-term implications for these countries. If remittances are acting as a substitute for social transfers, then this will significantly increase the dependence of the developing world on the advanced industrial economies, and given that a household will most likely only receive a remitted income if a family member migrates, then this will render income redistribution in developing world economies, a somewhat stochastic process. In the long-term, it may ultimately even result in higher levels of migration. What is more, if the family member making the investment decision for the remitted income is less skilled at allocating this capital than the government designed social program, then this will have long-term ramifications for the efficiency of domestic investment.  

However, if remittances are leading to a reduction in social security and welfare expenditure, but an increase in overall levels of government expenditure, where is the money saved from welfare transfers going? An answer to this question might lie in recent work by Rickard, who argues that the efficiency concerns of economic globalization induce governments to cut expenditure on social welfare in order for governments to fund industry subsidies. Remittances appear to be complimentary to this process. In some respects, for developing world countries, they facilitate the efficiency pressures generated by increased international economic integration. They allow governments in
developing countries to withdraw from the provision of social welfare, thereby facilitating increased transfers to domestic industry.

Finally, given that remittances are associated with reduced electoral support for parties who advocate redistribution, this may have serious implications for the axis of political competition across Latin America. In countries with large inflows of remittances, these payments may diminish the importance of the general left-right cleavage and deflate the traditional distributive campaigns of the left. In fact, it may help to explain why in some Latin American countries, we are witnessing the increasing saliency of issues, such as crime and public security, which are orthogonal to the traditional left-right divide. As the income, and income security, of recipients increase, the political space for left-leaning parties will be reduced.
REFERENCES


NOTES

1 All data utilized in this paper, together with the appendix, replication files and codebook, are available at: [author’s website].

2 World Bank 2011a; Ratha and Silwal 2012.

3 Ratha and Silwal 2012.

4 World Bank 2012.


7 See Rehm 2011; Gingrich and Ansell 2012.

8 For example, Adida and Girod 2011; López-Córdova 2006; Hildebrandt and McKenzie 2005.

9 Singer 2010.

10 Avendano, Gaillard and Nieto-Parra 2011.

11 Tyburski 2012.

12 Ahmed 2012.

13 Ahmed 2012; Singer 2012.


15 See Mares and Carnes 2009; Holland 2012.


18 For example, Cameron 1978; Garrett 1998; Rehm 2009, 2011; Gingrich and Ansell 2012. It is unclear however, how applicable these findings are to developing world democracies, particularly given the weak position of labor (see Rudra 2008), and the vulnerability of primary commodity exporters to the vagaries of international trade competition.

19 Rickard 2012.

20 Mares 2005.
21 Wibbels and Ahlquist 2011; also Haggard and Kaufman 2008.


23 See also Rickard 2012; Wibbels and Ahlquist 2011; Mares 2005; Rehm 2011; Gingrich and Ansell 2012.


26 The wording of the question was as follows: Do you or someone else living in your household receive remittances, that is, economic assistance from abroad?

27 For example, Adida and Girod 2011; López-Córdova 2006; Hildebrandt and McKenzie 2005; and for overviews see Fajnzylber and López 2006; Brown 2006.

28 See Barajas et al. 2009.

29 Singer 2010.

30 Kurtz 2004; Tyburski 2012.

31 Ahmed 2012.

32 Chaudhry 1997.

33 Ahmed 2012.

34 Singer 2012.


36 Adida and Girod 2011; Chami et al. 2008; Fajnzylber and López 2006; Adams and Cuecuecha 2010.


38 Kapur 2004; Of course, economic crises may also motivate family members to migrate and begin transferring money back home (Ratha 2003,161).

39 Chami, Hakura and Montiel 2009.

40 Singer 2010, 311.


42 Amuedo-Dorantes and Pozo 2011; Amuedo-Dorantes and Pozo 2006.

43 Remittances are also a remarkably stable cross-border financial flow. During the 1990s, remittances, in comparison to capital flows, were one of the least volatile sources of foreign exchange earnings for developing economies (Ratha 2003, 160). In fact, during the recent global financial crisis, remittances proved remarkably resilient. They fell 5.5 per cent in 2009, but by 2010 they had all but recovered, in
comparison to a 40 per cent decline in FDI and a 46 per cent decline in private debt and equity flows during the same period (World Bank 2011a).


45 See Alesina and Giuliano 2009, 5-6; also Bénabou and Ok 2001.

46 The full models, plus details of the questions used to construct all of the variables in these models can be found in the web-appendix.

47 See also Rehm 2011.

48 Tyburski 2012; Singer 2010; Of course, remittances may also be used to purchase private health insurance, which in turn may reduce interest in the quality of the public health service (see also Ahmed 2012, 162). However, there does not appear to be any discernable relationship between those who receive remittances and those with private health insurance from the 2009 Latinobarómetro survey or the 2010 LAPOP survey.

49 Singer 2012, 11.

50 Ahmed 2012, 11.

51 See Weitz-Shapiro 2012; Pfutze 2013.

52 Rehm 2011, 271.

53 Singer 2012, 8.

54 CEPAL 2007, 108.

55 CEPALSTAT 2012.

56 Descriptive statistics for all variables can be found in the appendix.

57 World Bank 2012.


60 World Bank 2012.

61 Chinn and Ito 2008.

62 Coppedge 1997; Pop-Eleshe 2009.

63 Wiesehomeier and Benoit 2009.

64 Baker and Greene 2011.

65 For examples, see Rickard 2012, 1176.
If we turn to columns 3 and 5, we can observe the effect of remittances on health and education expenditure, respectively. The corresponding long-run multipliers for these models, together with their standard errors, can be found in columns 4 and 6. Although remitted income has no discernable immediate or lagged effect on health expenditure, when combined, the total transitory and long-run effects of remittances reduce government spending on health. However, the substantive size of this relationship is rather small. An increase in the volume of remittances, from the 10th to the 90th percentile, is equivalent to a reduction in health spending of roughly 0.25 per cent. In contrast, remittances have no effect on education expenditure.

Trade has a positive long-term effect on education, suggesting that Latin American governments are concerned with human capital formation (see also Kaufman and Segura-Ubiergo 2001; Wibbels 2006; Huber, Mustillo and Stephens 2008; Rudra 2004). Tentative evidence for some type of compensatory effect may be found in the positive long-run relationship between capital account openness and social security and welfare spending (see also Singer 2012), while unsurprisingly, over time, wealthier states spend more on health and education. Finally, as indicated by the long-run multipliers, left governments have a positive effect on social welfare, health and education expenditure.

For a full discussion, see Barajas et al. 2009.

Based on simple fixed-effects OLS regressions, and also the first-stage results of the 2SLS estimations, which can be found in the web-appendix.


See Staiger and Stock 1997; Stock and Yogo 2005.

The results of the Sargan and Basman tests of overidentifying restrictions, indicate that the instruments are valid, uncorrelated with the error term and correctly excluded from the estimated equation.

Barajas et al. 2009.

Dunning (2008) advises caution when extrapolating substantive effects from instrumental variable analyses.

Ahmed 2012.

Baker and Greene 2011.

Wiesehomeier and Benoit 2009.

For more information, please see the web-appendix.

Latinobarómetro 2009.

Wiesehomeier and Benoit 2009.

This effect is not simply a product of income or ideology. Tests reveal multi-collinearity is not a problem in any of these models. For example, the correlation between those who receive remittances once a month and the rich across the region is only 0.02. The correlation between remittance recipients and those who self-identify on the right is -0.002.

Tyburski 2012; Ahmed 2012; Adida and Girod 2011; Singer 2010; Singer 2012.


See Tyburski 2012; Ahmed 2012; Singer 2010; Singer 2012.

See Avendano, Gaillard and Nieto-Parra 2011.

See also Rudra 2004.

Barajas et al. 2009.

Rickard 2012.

Wiesehomeier and Doyle 2014.
<table>
<thead>
<tr>
<th></th>
<th>Social Security</th>
<th>Soc. Sec. LRM</th>
<th>Health</th>
<th>Health LRM</th>
<th>Education</th>
<th>Education LRM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Δ.Remittances</strong></td>
<td>0.00542</td>
<td>0.0171</td>
<td>0.0413</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remittances_{t-1}</td>
<td>(0.0490)</td>
<td>(0.0208)</td>
<td>(0.0395)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Δ.Trade</strong></td>
<td>0.000859</td>
<td>0.000515</td>
<td>0.000241</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade_{t-1}</td>
<td>(0.00678)</td>
<td>(0.00247)</td>
<td>(0.00386)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Δ.Capital Openness</strong></td>
<td>0.218***</td>
<td>0.0147</td>
<td>0.0462</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Openness_{t-1}</td>
<td>(0.0687)</td>
<td>(0.0341)</td>
<td>(0.0672)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Δ.GDP per capita (ln)</strong></td>
<td>0.468</td>
<td>0.566**</td>
<td>0.816**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per capita (ln)_{t-1}</td>
<td>(0.0565)</td>
<td>(0.245)</td>
<td>(0.387)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Δ.Inflation (ln)</strong></td>
<td>-0.0406</td>
<td>-0.139</td>
<td>0.00440</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation (ln)_{t-1}</td>
<td>(0.183)</td>
<td>(0.0936)</td>
<td>(0.130)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Δ.Dependency</strong></td>
<td>-0.260</td>
<td>-0.476</td>
<td>-0.971***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependency_{t-1}</td>
<td>(0.428)</td>
<td>(0.292)</td>
<td>(0.406)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Δ.Left Government</strong></td>
<td>0.0117</td>
<td>0.0894</td>
<td>0.0998</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Government_{t-1}</td>
<td>(0.130)</td>
<td>(0.0872)</td>
<td>(0.163)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Δ.Democracy</strong></td>
<td>0.0486**</td>
<td>-0.0159</td>
<td>0.0203</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Democracy_{t-1}</td>
<td>(0.0215)</td>
<td>(0.0208)</td>
<td>(0.0200)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spending_{t-1}</td>
<td>-0.430***</td>
<td>-0.453***</td>
<td>-0.451***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0662)</td>
<td>(0.0765)</td>
<td>(0.0751)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>3.769</td>
<td>0.383</td>
<td>-2.463</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.579)</td>
<td>(1.996)</td>
<td>(2.718)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>243</td>
<td>250</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>R-squared</strong></td>
<td>0.365</td>
<td>0.350</td>
<td>0.350</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Robust standard errors in parentheses; estimated with country and year fixed-effects (not shown); standard errors for the long-run multipliers are generated with the Bewley (1979) transformation; ***p<0.01, **p<0.05, *p<0.1

**Table 1**: Error Correction Model: The Effect of Remittances on Social Spending in Latin America
<table>
<thead>
<tr>
<th>Remittances_{t-1}</th>
<th>Social Security</th>
<th>Health</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.474**</td>
<td>-0.0969</td>
<td>-0.194*</td>
<td></td>
</tr>
<tr>
<td>(0.645)</td>
<td>(0.193)</td>
<td>(0.114)</td>
<td></td>
</tr>
<tr>
<td>Inflation (ln)_{t-1}</td>
<td>-1.007</td>
<td>-0.212</td>
<td>-0.212</td>
</tr>
<tr>
<td>(1.035)</td>
<td>(0.403)</td>
<td>(0.280)</td>
<td></td>
</tr>
<tr>
<td>Trade_{t-1}</td>
<td>-0.0283</td>
<td>-0.00286</td>
<td>0.00688</td>
</tr>
<tr>
<td>(0.0264)</td>
<td>(0.00780)</td>
<td>(0.00953)</td>
<td></td>
</tr>
<tr>
<td>Capital Openness_{t-1}</td>
<td>0.340</td>
<td>0.00881</td>
<td>0.0739</td>
</tr>
<tr>
<td>(0.430)</td>
<td>(0.150)</td>
<td>(0.190)</td>
<td></td>
</tr>
<tr>
<td>GDP per capita (ln)_{t-1}</td>
<td>0.441</td>
<td>0.341</td>
<td>-0.356</td>
</tr>
<tr>
<td>(1.555)</td>
<td>(0.536)</td>
<td>(0.512)</td>
<td></td>
</tr>
<tr>
<td>Democracy_{t-1}</td>
<td>0.429*</td>
<td>0.177**</td>
<td>0.134**</td>
</tr>
<tr>
<td>(0.234)</td>
<td>(0.0745)</td>
<td>(0.0644)</td>
<td></td>
</tr>
<tr>
<td>Left Government_{t-1}</td>
<td>0.556</td>
<td>0.249</td>
<td>0.567*</td>
</tr>
<tr>
<td>(1.272)</td>
<td>(0.387)</td>
<td>(0.325)</td>
<td></td>
</tr>
<tr>
<td>Dependency_{t-1}</td>
<td>0.179</td>
<td>0.000262</td>
<td>0.0141</td>
</tr>
<tr>
<td>(0.188)</td>
<td>(0.115)</td>
<td>(0.0925)</td>
<td></td>
</tr>
<tr>
<td>Growth of Trading Partners</td>
<td>0.251</td>
<td>0.0491</td>
<td>-0.0518</td>
</tr>
<tr>
<td>(0.235)</td>
<td>(0.0789)</td>
<td>(0.0679)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-3.584</td>
<td>-0.873</td>
<td>5.290</td>
</tr>
<tr>
<td>(16.38)</td>
<td>(7.564)</td>
<td>(6.857)</td>
<td></td>
</tr>
<tr>
<td>F-Statistic</td>
<td>26</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Observations</td>
<td>242</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>R-squared</td>
<td>-0.946</td>
<td>0.114</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Note: Instrumental variable regression; robust standard errors, clustered by country, in parentheses; second-stage results only shown; *** p<0.01, ** p<0.05, * p<0.1

**Table 2:** Instrumental Variable Analysis: The Effect of Remittances on Social Spending in Latin America
### Table 3: The Relationship between Remittance Flows and Electoral Support for the Left in Presidential and Legislative Elections Across Latin America (Macro-Level)

<table>
<thead>
<tr>
<th></th>
<th>Presidential Elections</th>
<th>Legislative Elections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remittances</td>
<td>-0.322**</td>
<td>-0.285**</td>
</tr>
<tr>
<td></td>
<td>(0.136)</td>
<td>(0.128)</td>
</tr>
<tr>
<td>Age of Democracy</td>
<td>-1.877</td>
<td>0.648</td>
</tr>
<tr>
<td></td>
<td>(1.942)</td>
<td>(1.501)</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>-0.104</td>
<td>-0.119</td>
</tr>
<tr>
<td></td>
<td>(0.0678)</td>
<td>(0.0714)</td>
</tr>
<tr>
<td>Inflation (ln)</td>
<td>-0.0540</td>
<td>-0.174</td>
</tr>
<tr>
<td></td>
<td>(0.217)</td>
<td>(0.181)</td>
</tr>
<tr>
<td>GINI Coefficient</td>
<td>-0.137</td>
<td>-0.201**</td>
</tr>
<tr>
<td></td>
<td>(0.108)</td>
<td>(0.0784)</td>
</tr>
<tr>
<td>Urban Population</td>
<td>0.159</td>
<td>0.399**</td>
</tr>
<tr>
<td></td>
<td>(0.265)</td>
<td>(0.179)</td>
</tr>
<tr>
<td>Left Incumbent</td>
<td>-0.438</td>
<td>-1.264*</td>
</tr>
<tr>
<td></td>
<td>(0.616)</td>
<td>(0.635)</td>
</tr>
<tr>
<td>Constant</td>
<td>16.12</td>
<td>-16.90</td>
</tr>
<tr>
<td></td>
<td>(27.06)</td>
<td>(16.17)</td>
</tr>
<tr>
<td>Observations</td>
<td>62</td>
<td>60</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.898</td>
<td>0.915</td>
</tr>
</tbody>
</table>

Note: OLS regression with robust standard errors in parentheses. Estimated with country and year fixed-effects, which are not reported for the sake of presentation; *** p<0.01, ** p<0.05, * p<0.1
<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receive Remittances Once a Month</td>
<td>-1.118***</td>
<td>-1.105***</td>
<td>-1.074***</td>
<td>0.876***</td>
</tr>
<tr>
<td></td>
<td>(0.364)</td>
<td>(0.368)</td>
<td>(0.365)</td>
<td>(0.276)</td>
</tr>
<tr>
<td>Receive no Remittances at all</td>
<td>-1.453***</td>
<td>-1.433***</td>
<td>-1.419***</td>
<td>-1.450***</td>
</tr>
<tr>
<td></td>
<td>(0.274)</td>
<td>(0.272)</td>
<td>(0.274)</td>
<td>(0.274)</td>
</tr>
<tr>
<td>Right</td>
<td>3.224***</td>
<td>3.247***</td>
<td>3.249***</td>
<td>3.242***</td>
</tr>
<tr>
<td></td>
<td>(0.329)</td>
<td>(0.328)</td>
<td>(0.326)</td>
<td>(0.325)</td>
</tr>
<tr>
<td>Left</td>
<td>-0.345</td>
<td>-0.414</td>
<td>-0.412</td>
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<tr>
<td></td>
<td>(0.304)</td>
<td>(0.295)</td>
<td>(0.296)</td>
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<tr>
<td>Rich</td>
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<td>-0.117</td>
<td>-0.151</td>
<td>-0.143</td>
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<tr>
<td></td>
<td></td>
<td>(0.201)</td>
<td>(0.187)</td>
<td>(0.187)</td>
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<tr>
<td>Middle Income</td>
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<tr>
<td>Very Poor</td>
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<tr>
<td>High School</td>
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<td>0.158</td>
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<tr>
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<tr>
<td>Middle Age</td>
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<tr>
<td>Old</td>
<td>0.352</td>
<td>0.342</td>
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<tr>
<td></td>
<td>(0.286)</td>
<td>(0.283)</td>
<td></td>
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<td>State Employee</td>
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<tr>
<td>Constant</td>
<td>10.47***</td>
<td>10.61***</td>
<td>10.32***</td>
<td>9.544***</td>
</tr>
<tr>
<td></td>
<td>(0.400)</td>
<td>(0.427)</td>
<td>(0.569)</td>
<td>(0.627)</td>
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<tr>
<td>Observations</td>
<td>7,975</td>
<td>7,975</td>
<td>7,975</td>
<td>7,975</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.089</td>
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Note: OLS regression with robust standard errors, clustered by region, in parentheses. Omitted categories: young (17-34 years old), poor, lowest education and center; *** p<0.01, ** p<0.05, * p<0.1

**Table 4:** Electoral Support of Remittance Recipients for Left-Leaning Parties, Latinobarómetro 2009 (Individual-Level)
Note: The thick black lines within each box represent the median. The outside edges of the boxes represent the 25% quantile and the 75% quantile. The whiskers report outliers. The hollow circles represent datapoints 1.5 times outside of the interquartile range.

**Figure 1:** Variation in Social Security and Welfare Spending across Latin America (1990-2009)
Figure 2: Remittances across Latin America
Note: Both graphs are based on logit models, where the dependent variable is the belief in the fairness of the income distribution. These models can be found in Table B in the web appendix. In the left-hand pane, remittances are represented by a dichotomous variable (Model 1). Each diamond represents the odds ratio from the logit model. The black lines represent 95 per cent confidence intervals. In the right-hand pane, remittances is an ordinal variable from 1-5 (Model 2), which was flipped for ease of interpretation. Each diamond represents the probability that the respondent believes the distribution of income is fair, disaggregated by the frequency that they receive remittances. The black lines represent 95 per cent confidence intervals.

**Figure 3: Remittances and Preferences for Redistribution in Latin America**