
International Remittances and Migrant Portfolio Interests

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Background on Remittances

What Are Remittances?

Transfers of funds from migrants to relatives or friends in their country of origin.

Why Do We Care About Them?

1. Remittances constitute one of the **largest** and **least volatile** sources of foreign exchange in many developing economies
 - ❑ Often Exceeds FDI and net official development assistance flows,
 - ❑ Surpasses tourism income,
 - ❑ Accounts for more than 10% of GDP in many countries, and
 - ❑ Often exceeds their largest export.
 2. The magnitude of these remittance flows is only **expected to rise** with the increasing out-migration experienced by many developing countries.
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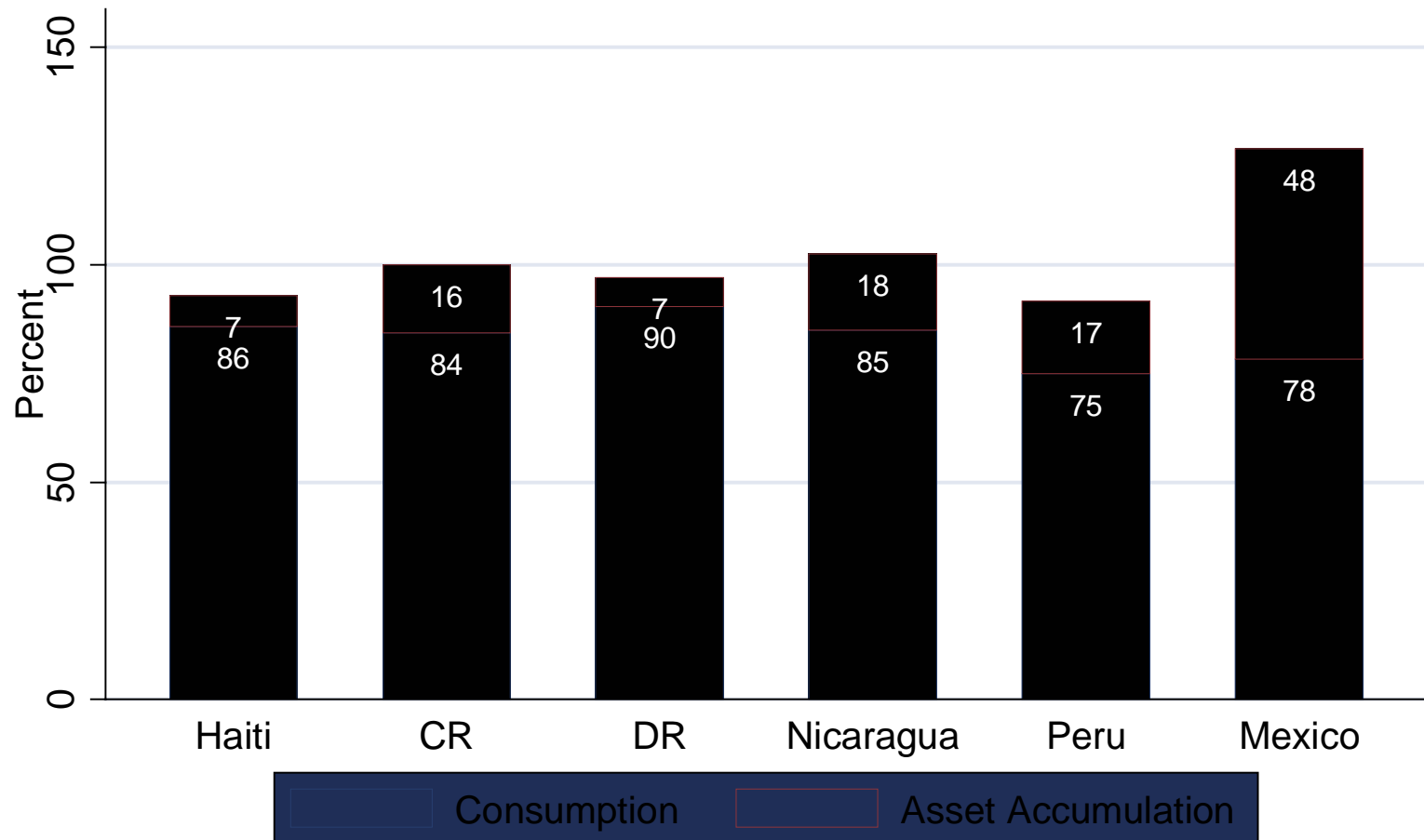
What Do We Know About Them?

Using data from the MMP (Mexico) and the LAMP (Costa Rica, Dominican Republic, Haiti, Nicaragua, and Peru):

FROM THE SENDING SIDE....

- 1. Who Sends?** About **70%** of immigrants.
- 2. How Much is Sent?** **\$300/month** or **40%** of monthly earnings. Yet, these figures vary across countries, i.e. Dominicans send \$179/month (16% of earnings) and Costa Ricans \$493/month (55% of earnings).
- 3. For What Purposes?** **Consumption** in **79%** of the cases, particularly among unauthorized or less educated immigrants. Yet, **45%** of immigrants send for **asset accumulation** purposes.

Percent Remitting for Consumption and Asset Accumulation



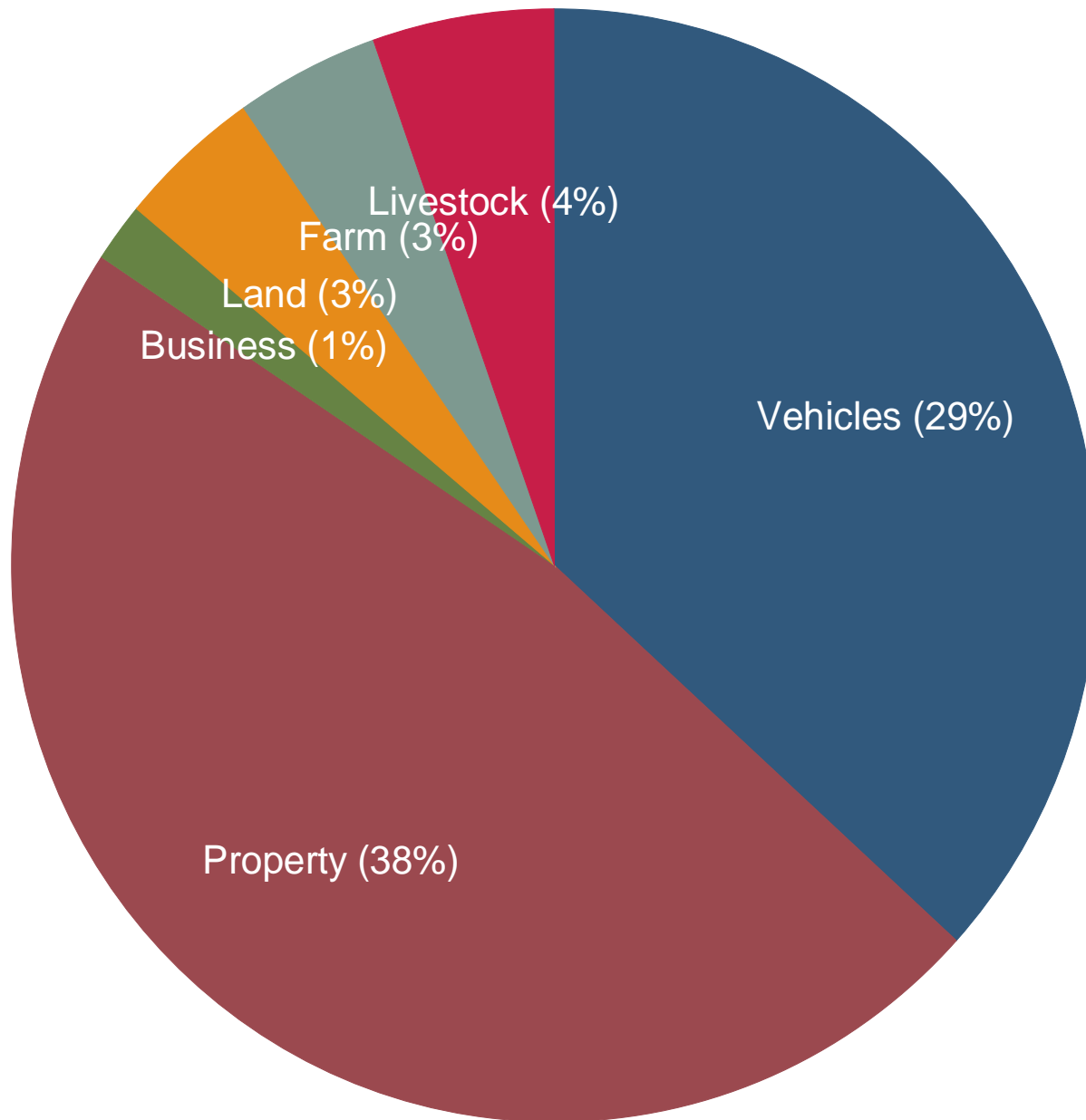
Note: Percentages do not add to 100 as more than one purpose may be reported

What Do We Know About Them?

FROM THE RECEIVING SIDE...

- 1. Who Receives Remittances?** About 2% of interviewed households.
- 2. How Much?** A “large” amount relative to HH income for 1/2 of HHs.
- 3. For What Purposes?** About 45% of remittance-receiving households use this income for asset accumulation such as property.

Percent of HHs Declaring Using Remittances for Financing



What Do We Know About Them?

7. Remittances can have macroeconomic impacts via:

- a) Exchange rates (e.g. Dutch Disease)
- b) Financial sector development.

8. What are some of the microeconomic impacts of remittances?

- a) **On Employment:** They reduce female LS and change the composition of male LS.
 - b) **On Business Ownership:** Although remittances are more frequently received by business owners, they do not necessarily promote business ownership.
 - c) **On Education:** They raise the educational attainment of boys and girls and ameliorate the disruptive impacts of household migration.
 - d) **On Healthcare Usage:** They raise the likelihood of incurring healthcare expenditures and the peso amount spent significantly more than other sources of income, particularly in lower income households.
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What This Talk is About...

- It has to do with remitting motives...
- Remittances are sent for a variety of reasons with two distinct ends:
 - *Immediate consumption:*
 - Altruistic purposes, e.g. help family members pay for rent, food, etc.
 - To repay loans to family who financed migration or education,
 - *Ensure future consumption:*
 - To accumulate retirement assets,
 - With inheritance motives,
 - For insurance purposes (e.g. in case one needs to return),
 - To save toward a future “target purchase” (e.g. a plot of farm land, a taxi, or a home).
- Our focus is related to the second, i.e.:
 - **Ensure future consumption or to smooth it inter-temporally.**

Motivation

Consumption
smoothing

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graph TD; A[Consumption smoothing] --- B[Spatial Diversification]; A --- C[Inter-temporal Diversification]
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Spatial
Diversification

Inter-temporal
Diversification

Motivation - Continued

**But, natives also like to save for consumption smoothing...
what is special about immigrants?**

- Immigrants have knowledge of the host and the home countries, their markets, and useful contacts that are useful in accumulating assets:
 - Indeed, it is recognized that immigrants do hold assets at home and abroad (e.g. see Gammage, 2007).
- Yet, few studies try to understand the macroeconomic conditions in the home and the host countries driving migrants' remitting behavior.

Objective and Finding

- **Objective:** To link relative macroeconomic conditions in the home and the host countries –portfolio variables– to individual migrants' remitting behavior.
- **Findings:** Migrants, despite being altruistic, also care about portfolio variables:
 - Migrants vary their remittances in response to movements in portfolio variables in the home and host countries to take advantage of changing economic opportunities.

Policy Relevance?

- **To better assess the reliability of immigrant remittances to variations in economic conditions, e.g.**
 - Several studies have argued that remittances serve as a reliable source of foreign exchange. As such, countries with large emigrant populations are believed to be less susceptible to currency crises (Ratha 2004, Bugamelli and Paterno 2005).
 - But if remitters are responsive to portfolio variables, remittances may not constitute a reliable source of foreign exchange to counteract speculative outflows and idiosyncratic economic downturns.

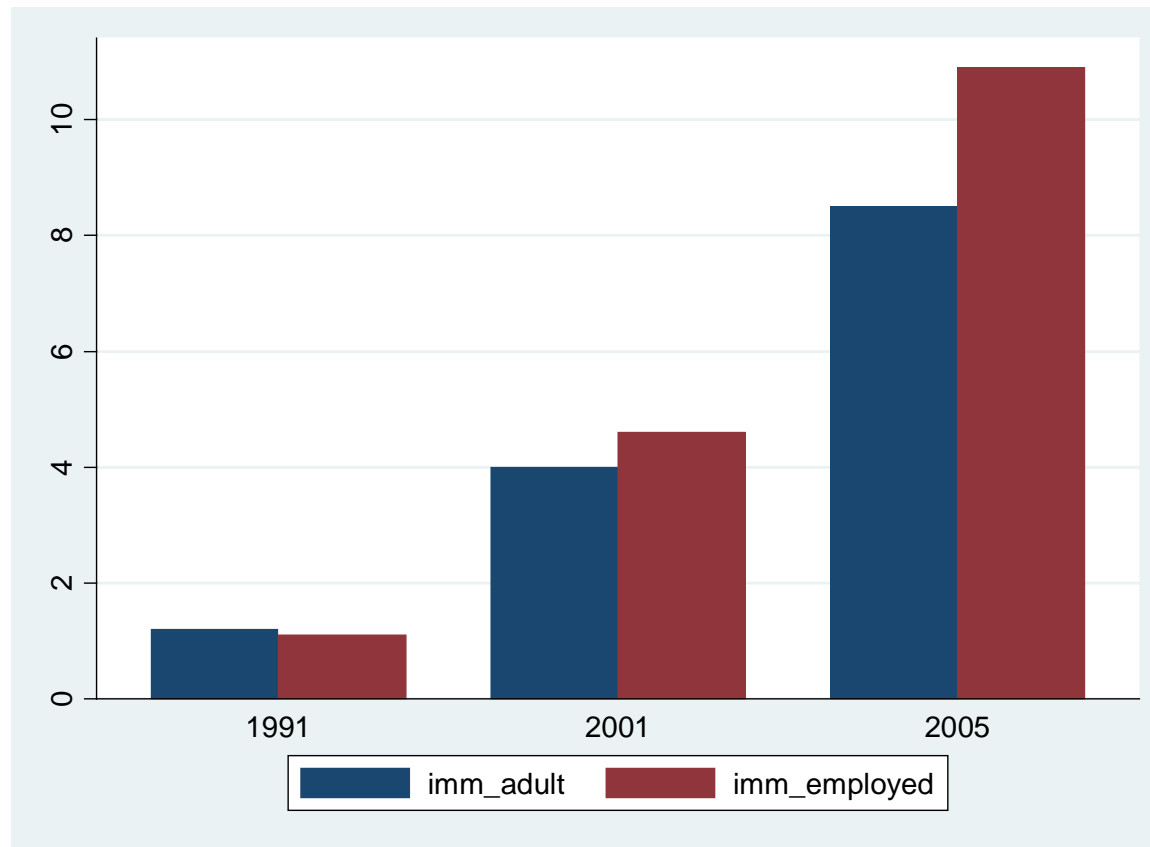
If so, developing economies should avoid growing accustomed and relying on remittances.

Why Focus on Spain?

- Spain has experienced an impressive growth in its immigrant population over the past 15 years: from 1.2% of the adult population (300,000 individuals) in 1991 to 10% (i.e. 4.5 million immigrants) in 2007.
- Spain is one of the leading countries from which remittance flows originate after the U.S.
- A brand new immigrant survey: *Encuesta Nacional de Inmigrantes (ENI-07)*:
 - Representative of the current immigrant stock in Spain.
 - Informs on the remitting behavior of a geographically diverse group of immigrants:
 - This allows us to relate cross country variations in exchange rate movements and other market conditions to remittance behavior by individual immigrants.

Some Facts: Spanish Immigration

- **Large Magnitude and Rapid Growth:** Spanish Immigrants as share of total population and as share of total adult employed population.



More on Spanish Immigration...

■ History:

- Until quite recently, Spain was a country of emigrants.
- Since the year 2000, Spain has displayed one of the largest rates of immigration in the world –three to four times as large as the average immigration rate in the U.S.
- In 2008, the Spanish National Institute of Statistics (INE) estimated that 11% of Spanish residents had a foreign nationality.

More on Spanish Immigration...

- **Geographic Distribution:**

- This new immigrant population is concentrated in a few regions; Andalucía, Balearic Islands, Canary Islands, Cataluña, Valencia, Madrid and Murcia.

More on Spanish Immigration...

LA POBLACIÓN EXTRANJERA EN ESPAÑA (2005)

España

Población censada con nacionalidad extranjera en el año 2005: 3.730.610

Media nacional: 8,46%

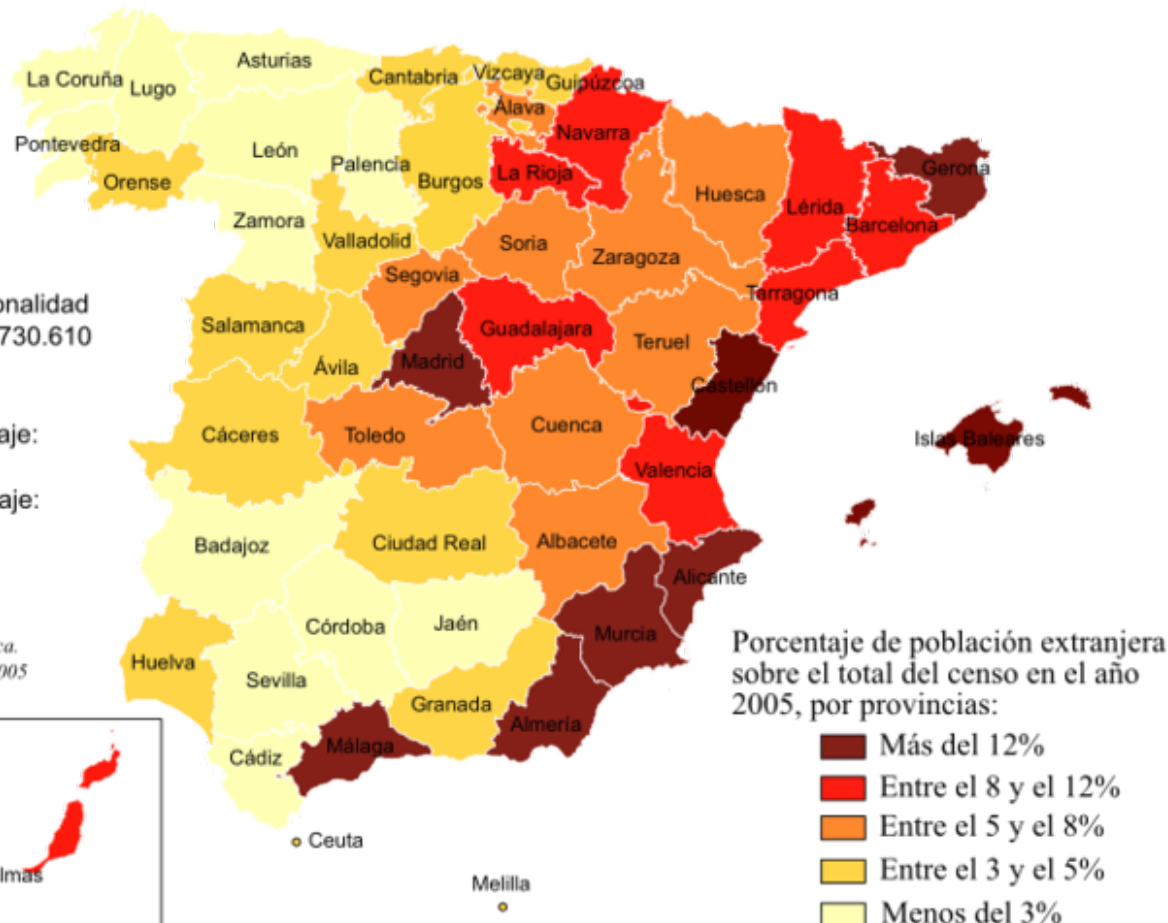
Provincia con mayor porcentaje:

Alicante (18,57%)

Provincia con menor porcentaje:

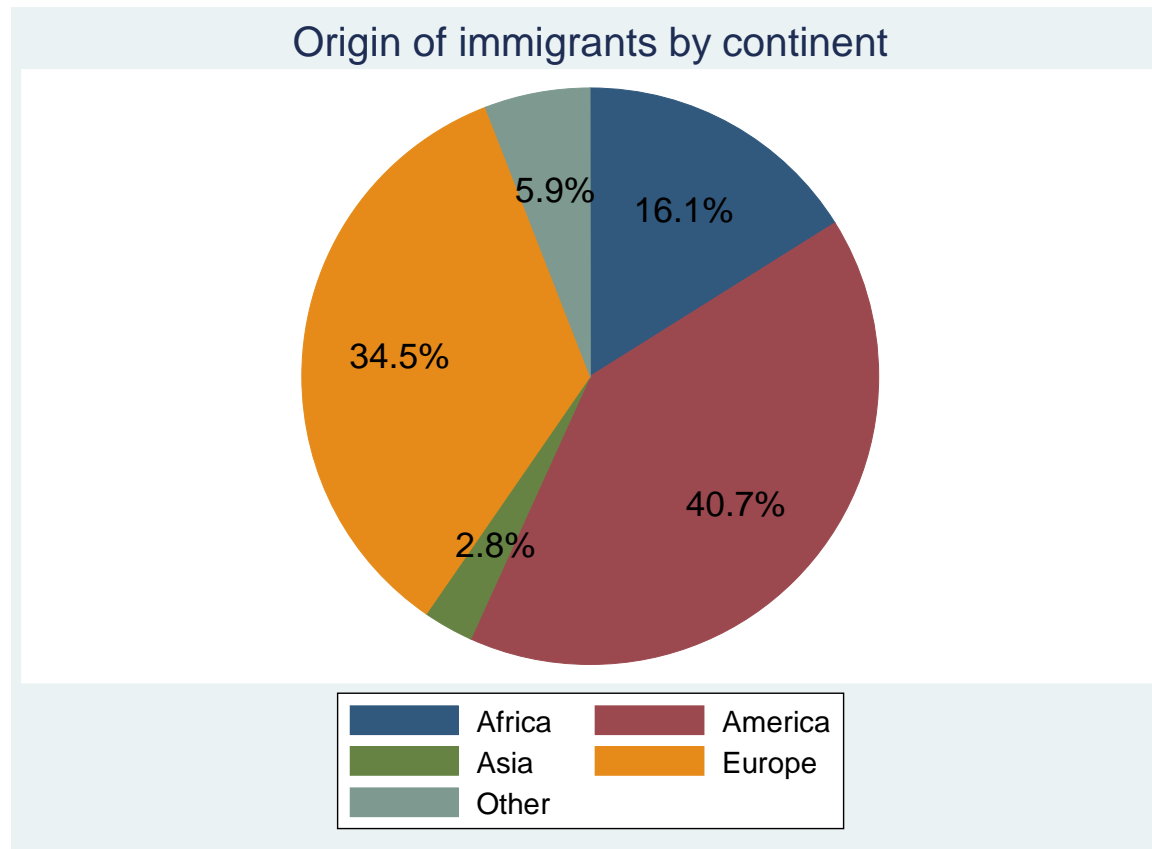
Jaén (1,72%)

*Fuente: Instituto Nacional de Estadística.
Datos según el censo a 1 de enero de 2005*



More on Spanish Immigration...

- **Diverse Origins.** Most common countries are: Morocco, Romania, Ecuador, Colombia, France, Argentina, and the U.K.



More on Spanish Immigration...

■ Immigrants' Legal Status:

- Spain follows the so-called *Ius Sanguinis* and *Ius Soli*.
 - The *Ius Sanguinis*: all individuals born from a Spanish mother or father are automatically considered Spanish.
 - The *Ius Soli*: all individuals born on Spanish soil if: (a) the mother or father was born in Spain, (b) the mother and father have unknown nationalities, or (c) both parents originate from countries that do not allow for the automatic transmission of nationality from parent to child. Everyone else born in Spain can opt for Spanish nationality after residing in Spain for a year (some recent exceptions exist).
- General rule: must have 10 years of continued legal residence.
- Because of their origin and numerous amnesties (1986, 1991, 1996, 2000-2001 and 2005), most immigrants are documented:
 - In 2008: 4.2 of the 5.2 million immigrants were legal residents –81%.

Literature on Remittances and Asset Accumulation

It can be grouped as follows:

1. **Migrants' self-reports regarding the purpose for remitting:** Useful, but do not inform on how portfolio variables impact remitting behavior.
2. **Comparisons of expenditure patterns of remittance-receiving and non-receiving households:** e.g. Taylor and Mora (2006), Adams (2005), Zarate-Hoyos (2004) and Airola (2007). They focus on *HHs in origin communities* and not on remitting migrants.
3. **Tests of associations between macroeconomic variables and aggregate remittance flows:** e.g. Faini (1994), Lianos (1997) and Higgins et al. (2004). They look at *aggregate* remittances and cannot inform on individuals' portfolio motives.
4. **One study links macroeconomic data to individual level data on migrants' remitting patterns:** e.g. Pozo and Vargas-Silva (2006). But it uses a *selected sample* of migrants (IRCA sample) and *lacks information* to properly gauge immigrants' portfolio interests.

As a reminder...Objective:

To link relative macroeconomic conditions in the home and the host countries –portfolio variables– to individual migrants' remitting behavior.

Testable Hypothesis

Hypothesis: If migrants have asset accumulation purposes in mind when sending money home, remittances should respond to portfolio variables. Specifically:

- **Home-host real interest rate differentials** ↑ remittances
- **Home-host per capital GDP growth** ↑ remittances
- **Real depreciation of home currency** ↑ or ↓ remittances
- **Real exchange risk** can ↑ or ↓ remittances if immigrants are allocating assets between the home and host countries

Methodology

- We estimate the following Tobit model:

$$R_i = a_1 + a_2 I + a_3 F + a_4 P + a_5 R + e_i$$

where:

- R is the euro amount remitted last year by the i th immigrant,
- I is a vector of immigrant characteristics,
- F is a vector of family characteristics,
- P is a vector of portfolio variables capturing changes and differences in market conditions and portfolio returns in the home and host communities, and
- R is a set of dummy variables indicative of the Spanish region.

Data

- **Encuesta Nacional de Inmigrantes (ENI-07)**
 - Representative of stock of Spanish immigration
 - It includes foreign-born individuals, at least sixteen years of age, residing in the Spain
 - Implemented between November 2006 and February 2007

General Sample Characteristics

Table 3: Characteristics of Immigrants by Continent of Origin

Variables	All	Africa	Americas	Asia	Europe	Oceania ^b
Male	0.55	0.57	0.40	0.57	0.44	0.47
Age	39	39	37	39	39	36
Time in Spain	13.2	15	10.6	13.6	15.2	24
Fluent in Spanish	0.98	0.88	0.99	0.99	0.99	1.0
No Education	0.09	0.29	0.05	0.11	0.05	0
Primary Education ^a	0.19	0.34	0.18	0.23	0.16	0.10
Secondary Education ^a	0.57	0.52	0.57	0.47	0.60	0.57
Tertiary Education ^a	0.23	0.12	0.25	0.31	0.24	0.33
Spanish Educational Degree	0.28	0.19	0.29	0.19	0.32	0.80
Employed	0.64	0.53	0.70	0.71	0.65	0.73
With documents	0.92	0.90	0.83	0.95	0.00	0.75
Home Country Asset Ownership	0.25	0.20	0.28	0.32	0.26	0.00
Plans on Returning Home	0.07	0.03	0.10	0.06	0.05	0.07
Married	0.54	0.64	0.48	0.63	0.54	0.66
Children in the HH	0.81	1.10	0.78	0.90	0.74	0.70
Children Outside Spain	0.61	0.81	0.60	0.74	0.55	0.66
Plans on Bringing the Family	0.24	0.40	0.32	0.34	0.11	0.00
Number	15,465	2475	6287	429	5331	30

Notes: (a) Conditional on some education; (b) Limited number of observations.

Remitting Patterns by Origin

Table 4: Remittances by Continent of Origin

Area of Origin	Number of Observations	Proportion Who Remits	Amount Remitted in euros (last year) ^a
All Immigrants	15465	0.37	1892
Africa	2475	0.40	1443
America	6287	0.48	2123
Asia	429	0.45	2121
Europe	5331	0.26	1670
Oceania	30	0.03	--

Notes: (a) Average amount remitted conditional on remitting a positive sum last year. Sample is too small for Oceania to report an amount.

- American immigrants seem the most likely to remit (50% do in 2006) and remit the largest sums.
- Immigrants from Europe are much less likely

Remitting Patterns by Legal Status

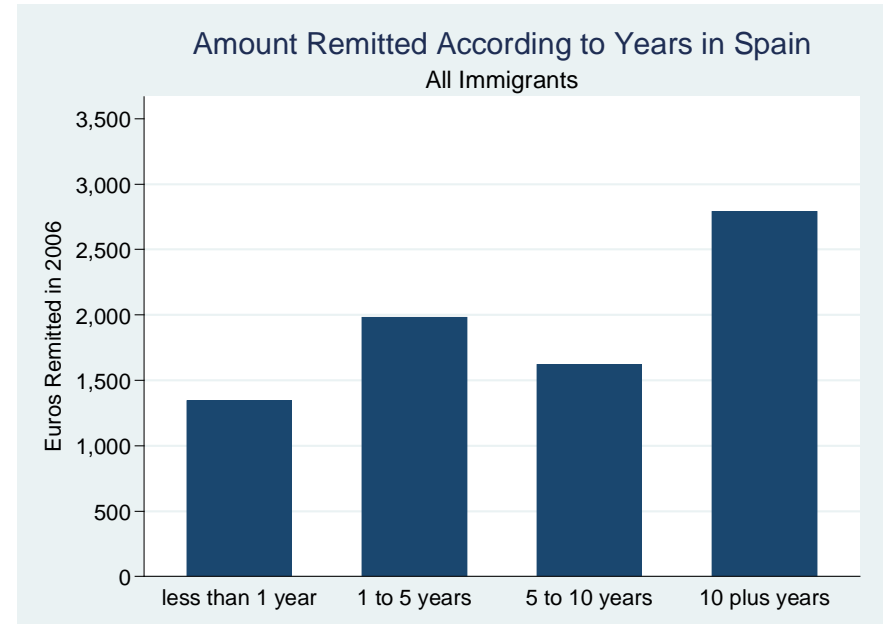
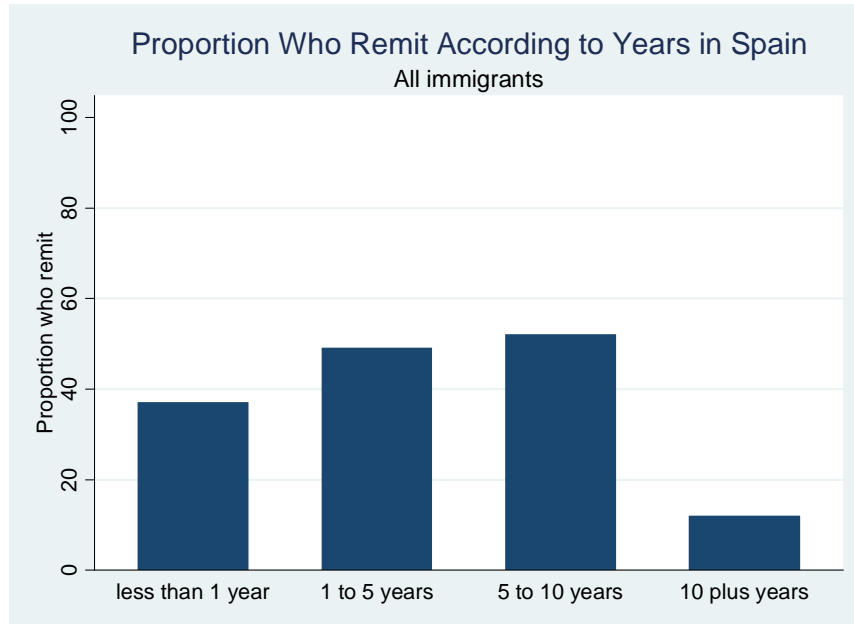
Table 5: Immigration Status and Remittances

Immigration Status	Number of Observations	Proportion Remitting	Euro Amount Remitted
With Documents	11467	0.40	1886
Without Documents ^a	983	0.50	2185

Notes: (a) Includes those in the process of regularizing their immigration status.

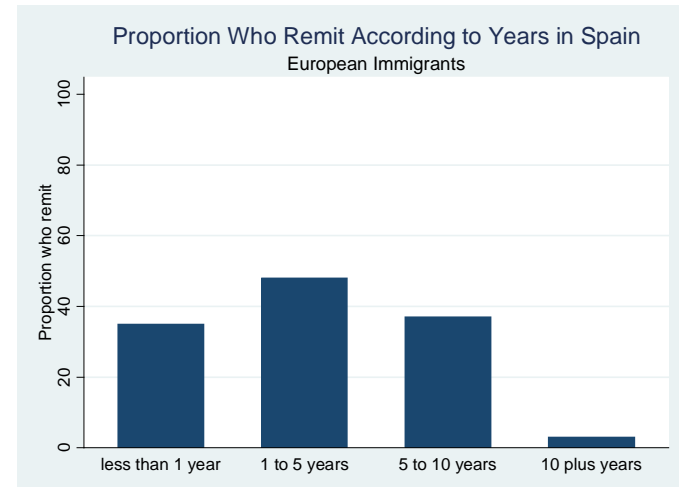
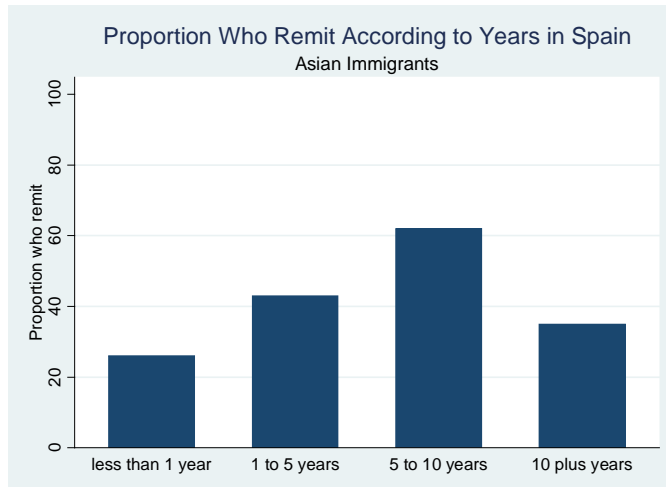
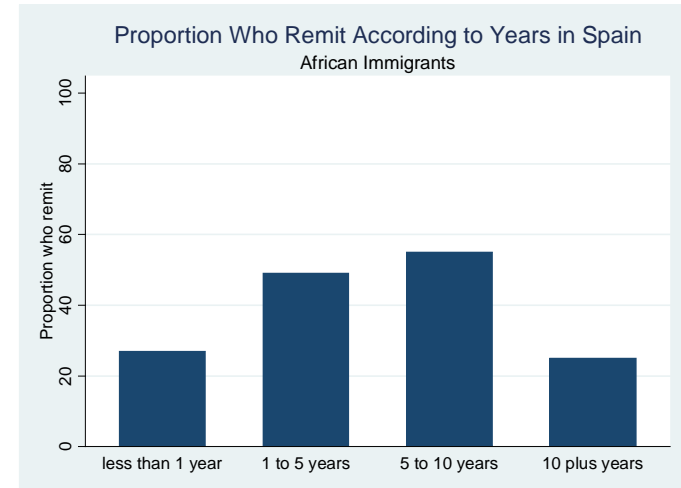
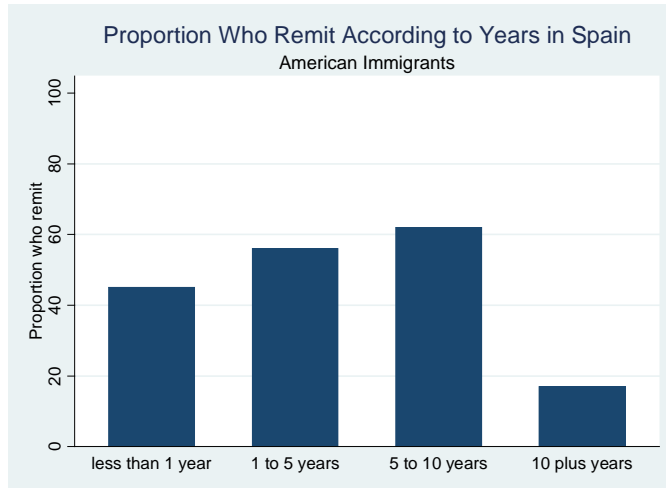
- **As noted by Amuedo-Dorantes and Pozo (2006), undocumented remit more: 50% vs. 40% of legal immigrants.**

Remitting by Length of Spell

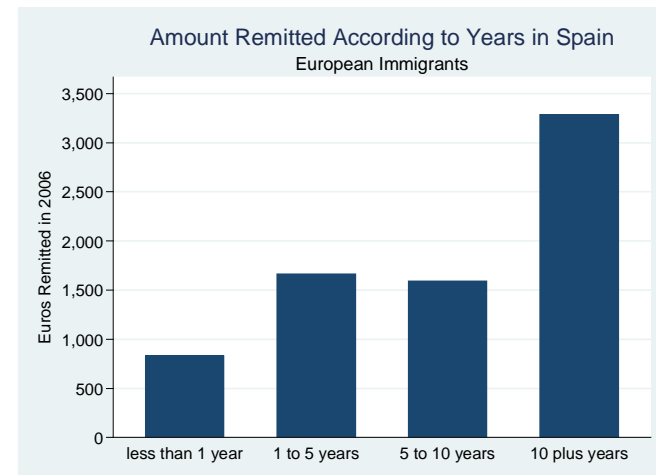
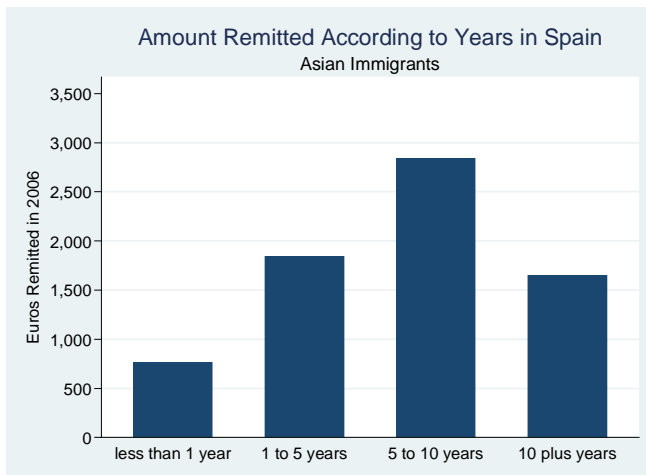
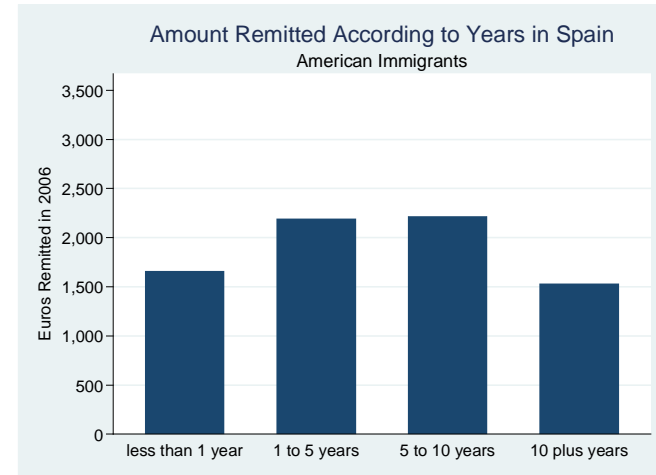
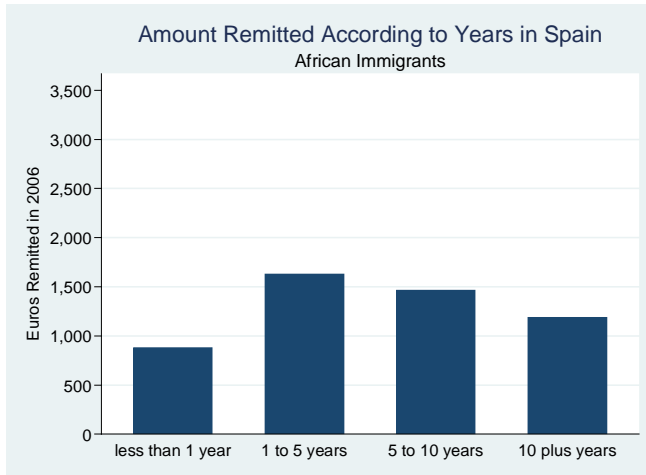


- As observed by Amuedo-Dorantes and Pozo (2006b), remittances follow an inverted “U” pattern:
 - The propensity to remit rises at first and diminish after 10 plus years of Spanish residency, regardless of origin.
 - The amount, however, fluctuates more due to Europeans’ behavior.

Remitting by Length & Origin (1)



Remitting by Length & Origin (2)



Remitters' Characteristics by Origin

Table 7: Characteristics of Remitters by Continent of Origin^a

	Africa	Americas	Asia	Europe
Male	0.73	0.38	0.58	0.45
Age	35	36	37	35
Time in Spain	8.5	6.3	10.9	5.2
Fluent in Spanish	0.89	0.99	1.0	0.99
No Education	0.29	0.05	0.11	0.04
Primary Education	0.35	0.20	0.24	0.13
Secondary Education	0.51	0.62	0.51	0.69
Tertiary Education	0.11	0.18	0.24	0.18
Spanish Educational Degree	0.07	0.13	0.12	0.09
Employed	0.71	0.80	0.84	0.80
With Documents	0.93	0.85	0.96	0.98
Home Country Asset Ownership	0.29	0.35	0.44	0.48
Plans on Returning Home	0.04	0.15	0.08	0.10
Married	0.65	0.47	0.67	0.55
Children in the HH	0.65	0.65	0.73	0.52
Children Outside Spain	0.60	0.54	0.69	0.44
Plans on Bringing the Family	0.68	0.52	0.57	0.31
N	996	3022	193	1392

Overall Findings for All Migrants

Some portfolio-type variables help explain remitting patterns:

- **Real exchange rate depreciations and its volatility:**
 - *Real exchange rate depreciations* could encourage immigrants' remitting for investment or altruistic purposes.
 - But not the *volatility*: a one standard deviation increase raises the probability of remitting money home by 1% point and the euro amount remitted yearly by 23 euros.
 - In fact, *migrants with assets back home are particularly attuned to the relative economic uncertainty.*

Findings by Region of Origin

- **Africans seem to react to differences in real interest rates:**
 - As the returns to their investments at home, relative to the home country, rise by 1% point, they become 4% points more likely to remit and send 74% more per year.
- **Africans, as well as Americans, also pay attention to real exchanges rates and relative economic uncertainty.**
 - This is particularly true if they already own assets at home.

Overall, migrants' remitting behavior appears to be driven by portfolio interests.

Summary

- **Migrants' remitting behavior is affected by the volatility of the real exchange rate**, suggesting that migrants' remitting is also driven by relative economic conditions that point to asset accumulation as an additional motivation for remitting.
- **Remittances differ with the region of origin of immigrants:**
 - *African immigrants are sensitive to relative interest rate returns*
 - *Both American and African immigrants respond to movements in the real exchange rate.*

In sum, portfolio variables do matter, but not uniformly across the globe.

Comments welcome!
Thanks!
