

# using eye tracking to study migrant remittances and welfare

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ASSA/ASHE, January 2018

Research Assistance

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*Supported by NSF EAGER Award 1649921*

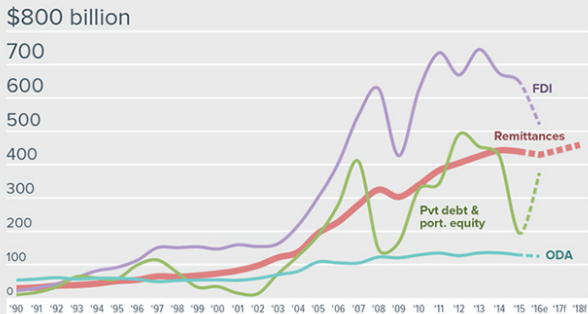
**Very preliminary and incomplete. Check with authors before citing.**

1. There are two types of randomized field experiments in this project
  - 1.1 Phase I: Lab-in-the-field experiments (so to speak)
  - 1.2 Phase II: Natural field experiments
2. Recently finished data collection for Phase I
  - 2.1 So, don't expect regressions!
3. As such, we welcome comments on
  - 3.1 Phase I: Empirical strategy
  - 3.2 Phase II: Design

# starting to motivate the problem

1. Migrant remittances are a significant driver of global development (World Bank 2015, Yang 2011).
2. Remittances to developing countries will reach US\$ 479 billion in 2017 (far exceeding official development assistance).

Remittance flows to developing countries **decreased by 2.4 percent to \$429 billion** in 2016 but are **larger than Official Development Assistance (ODA)** and **more stable than private capital flows**



# continuing to motivate the problem

1. Yet, sending remittances remains costly.
  - 1.1 Global average for sending US\$200 has held steady at 8%
  - 1.2 In some instances, fees may surpass 20%
2. Concern
  - 2.1 Some portion of these fees could be going towards “development”
3. 2009 G8 summit: Lower costs through
  - 3.1 Information
  - 3.2 Transparency
  - 3.3 Competition
  - 3.4 Cooperation

# a potential solution

1. Creation of publicly available comparison databases with costs, speed, and reliability of sending remittances.
2. A familiar analog
  - 2.1 Metasearch sites in the travel industry – kayak, orbitz, trivago, cheaptickets, ...
3. E.g. Morton et al. (2015) find that consumers benefit from simple, low-cost ways to make comparisons.
  - 3.1 A likely necessary condition is that consumers (migrants) actively engage in comparison-shopping or are perceived to.
4. This in turn requires metasearch sites to be simple and accessible.

# a potential problem to the potential solution

1. E.g. LoVoi et al. (2016) find that while migrants compare remittance fees across select brick-and-mortar providers, they do not necessarily compare that set to online providers.
  - 1.1 Claim: *'migrants don't use online banking ... too confusing'*.
  - 1.2 Despite online fees being 20-30% lower than in-store fees.
2. In short
  - 2.1 Metasearch sites have potential to disrupt remittance industry.
  - 2.2 But, the market segment that could potentially benefit most (\$200 and below) seems NOT to be using such sites.
  - 2.3 This research
    - 2.3.1 Why has take-up been low?
    - 2.3.2 Are there behavioral costs to search/comparison-shopping in this context?
    - 2.3.3 Combine choice data and non-choice (eye-tracking) data.

# how will the study achieve this?

1. Partner with `www.remitright.com`.
  - 1.1 First World Bank-certified metasearch platform for online money transfers from the US to select corridors.
  - 1.2 Unlike some travel sites, you cannot “transact” via RR.
2. Phase I (May-Oct 2017)
  - 2.1 ~ 380 migrants from El Salvador, Honduras, Guatemala residing in the DMV area.
  - 2.2 Other criteria:  $\geq 18$ ; sends remittances; read/write; no bifocals.
  - 2.3 Recruited through Casa de Maryland Workers’ Centers to complete a “job/task” (our remittance study).
  - 2.4 On average, 60 mins [\$50 & 10% of \$100 or \$300 sent to family via chosen carrier]
  - 2.5 Sequence of events  
Pre-survey – experiment (eye-tracking) – post-survey
3. Phase II (Spring-Summer 2018)
  - 3.1 Live field experiments on site (details tbd).

## remainder of the talk

1. Experiment design
2. Basic demographics of the sample
3. Some preliminary anecdotes



# the site's landing page

remitright.com

Change Language EN

Find the right company to send your money home

Find the best exchange rates and lowest fees

HOW MUCH WOULD YOU LIKE TO SEND?  
US \$1000

YOUR SEND DESTINATION  
India

CHOOSE TRANSFER SPEED  
A few days Same day or less

COMPARE

Questions?

# the site's results page (where the action is)

remitright.com

RemitRight

Change Language EN

## Send Money To Mexico

Money transfer companies offer very different Dollar to Peso exchange rates, fees, transfer speeds and delivery methods. Use RemitRight to compare companies and find the Right company for you.

Choose with confidence. RemitRight only lists companies that are subject to federal regulations and meet disclosure and consumer protection requirements.

HOW MUCH? 200 HERE TO? MEXICO- HOW SOON? A FEW DAYS - CHANGE

Sort Results By

- BEST VALUE
- FASTEST
- BEST REVIEWED

TRANSFER COMPANY	FX RATES AND FEES	FEATURES	COST RANKING
 Paypal ★★★★★ 2007 Trustpilot reviews	USD to MXN: 18.800	Receive 3,780 MXN <b>Transfer time: One day or less</b> Receive in bank account	<b>Best Value</b> SEND MONEY
 Ria Money Transfer ★★★★★ 386 Trustpilot reviews	USD to MXN: 19.020	Receive 3,804 MXN <b>Transfer time: 4 business days</b> Receive in bank account or cash	<b>Costs \$0.65 More</b> SEND MONEY
 Lucky Money ★★★★★ 0 Trustpilot reviews	USD to MXN: 18.810	Receive 3,782 MXN <b>Transfer time: Within minutes</b> Receive in bank account, cash or home delivery	<b>Costs \$4.54 More</b> SEND MONEY
 Transfast ★★★★★ 2128 Trustpilot reviews	USD to MXN: 18.000 \$0.00 Fee	Receive 3,600 MXN Transfer time: 3 business days Receive in bank account or cash	<b>Costs \$8.51 More</b> SEND MONEY
 worldremit ★★★★★ 7663 Trustpilot reviews	USD to MXN: 17.092	Receive 3,418 MXN <b>Transfer time: One day or less</b> Receive in bank account, cash or home delivery	<b>Costs \$21.73 More</b> SEND MONEY

Questions?

# overall design (two treatments a and b)

## 1. What do they have in common?

1.1 Subjects see three pages; so ultimately, make three choices

- Five minutes to review each page and choose preferred company

1.2 Both treatments have the following basic info as their first page

1.2.1 List of company names with

1.2.2 Transfer fee + exchange rate (when applicable) and

1.2.3 Whether the funds arrive in cash and/or a bank account

## 2. How are they different?

2.1 Treatment A

- Page 2: Basic + processing time
- Page 3: Basic + processing time + customer reviews

2.2 Treatment B

- Page 2: Basic + customer reviews
- Page 3: Basic + customer reviews + processing time

## 3. Other random variations

3.1 Amount sent: \$100 or \$300 (between-subjects)

3.2 Fee discount for one of the companies & list order

# example of treatment

RemitRight

## Send Money To India

Money transfer companies offer very different Dollar to Rupee exchange rates, fees, transfer speeds and delivery methods. Use RemitRight to compare companies and find the Right company for you.

Choose with confidence. RemitRight only lists companies that are subject to federal regulations and meet disclosure and consumer protection requirements.

HOW MUCH: 1000 WHERE TO: INDIA HOW SOON: SAME DAY CHANGE

Sort Results By: BEST VALUE FASTEST BEST REVIEWED

TRANSFER COMPANY	FX RATES AND FEES	FEATURES	COST RANKING
Transfast	USD to INR: 68.000	Receive 68,000 INR. Receive in bank account or cash.	Best Value

SEND MONEY

Questions?

RemitRight

## Send Money To India

Money transfer companies offer very different Dollar to Rupee exchange rates, fees, transfer speeds and delivery methods. Use RemitRight to compare companies and find the Right company for you.

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HOW MUCH: 1000 WHERE TO: INDIA HOW SOON: SAME DAY CHANGE

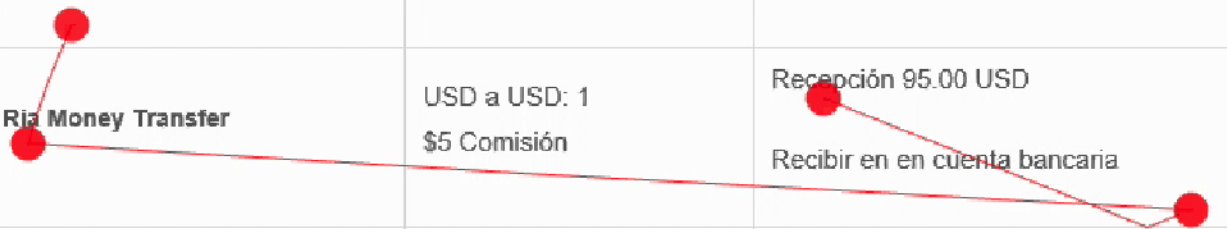
Sort Results By: BEST VALUE FASTEST BEST REVIEWED

TRANSFER COMPANY	FX RATES AND FEES	FEATURES	COST RANKING
Transfast	USD to INR: 68.000	Receive 68,000 INR. Transfer time: One day or less. Receive in bank account or cash.	Best Value

SEND MONEY

Questions?

	\$3.99 Comisión	Recibir en en cuenta bancaria o efectivo	<a href="#">Enviar dinero</a>
 <b>Lucky Money</b>	USD a USD: 1 \$4.99 Comisión	Recepción 95.01 USD Recibir en cuenta bancaria, efectivo, envío a domicilio	<a href="#">Enviar dinero</a>
 <b>Pangea</b>	USD a USD: 1 \$6.95 Comisión	Recepción 93.05 USD Recibir en en cuenta bancaria	<a href="#">Enviar dinero</a>
 <b>Ria Money Transfer</b>	USD a USD: 1 \$5 Comisión	Recepción 95.00 USD Recibir en en cuenta bancaria	<a href="#">Enviar dinero</a>
 <b>Money gram</b>	USD a USD: 1 \$6.99 Comisión	Recepción 93.01 USD Recibir en en cuenta bancaria o efectivo	<a href="#">Enviar dinero</a>
 <b>Paypal</b>	USD a USD: 1 \$4.2 Comisión	Recepción 95.80 USD Recibir en en cuenta bancaria	<a href="#">Enviar dinero</a>
 <b>worldremit</b>	USD a USD: 1 \$3.99 Comisión	Recepción 96.01 USD Recibir en cuenta bancaria, efectivo,	<a href="#">Enviar dinero</a>



# framework and main data points

1. Choice data (site clicks)
  - 1.1 Discrete choice model (resembling incentivized choice experiments).
2. Non-choice data (eye-tracking)
  - 2.1 Dynamic search model with computational processes.
  - 2.2 E.g. fixation (continuous look for  $\geq 50ms$ ).
  - 2.3 Reutskaja et al. propose three types of models
    - 2.3.1 Optimal search with zero costs.
    - 2.3.2 Satisficing model.
    - 2.3.3 Hybrid model.
    - 2.3.4 Need for a habit (anchoring) type model? Instead of assuming random initial search, a nonrandom anchor.
3. Survey data
  - 3.1 Typical patterns/habits/inertia.
  - 3.2 Preferred attributes consistent with eye-tracking (welfare?)
4. Post-survey data (anecdotes/practical suggestions).

1. Literature that may come to mind at this point
  - 1.1 Search (IO) → Stahl (1989) ...
  - 1.2 Eye-tracking (neuro/comp sci) → Reutskaja et al. (2011) ...
  - 1.3 Choice overload (psych) → Igenyar et al. (2000, 2004) ...
  - 1.4 Marketing → Russo and Rosen (1975) ...
2. Contributions (Phase I)
  - 2.1 Computational processes deployed by “remittance” consumers (i.e. migrants) during the search and decision processes?
    - 2.1.1 Of particular note here is the context, i.e. relatively low-income, low-education migrants in a relevant day-to-day field context.
    - 2.1.2 Most prior work has been in conventional lab and/or with “sophisticated” consumers (related, small  $N$ ).
  - 2.2 Response to varying degrees of information.
  - 2.3 Does this lead to different (potentially “better”) choices, e.g. lower fees?
    - 2.3.1 Break with “habit” of typical carrier?

# a session





## sample demographics

1. 53% women
2. Average age: 42 years
3. 51.65% ES, 15.78% HON, 32.57% GUA
4. \$2600 monthly HH income
5. HH size: 4
6. Remittance: \$237.73

# preliminary anecdotes

1. Inertia: There might be a significant part of the sample that chooses based on what they already do outside of the study.
2. Constraints to adopting site (“internet” more generally)
  - 2.1 Technology (cannot use PC or does not have; phone? unclear)
  - 2.2 Trust (workable through referrals)
  - 2.3 Compare by calling (workable with a larger service or self-reports by companies)
  - 2.4 Unclear whether company delivers where family is (workable)
  - 2.5 Existing companies that do NOT appear on site (workable)
3. Eye-tracking will shed light on whether “behavioral constraints” are buried underneath.