using eye tracking to study migrant remittances and welfare

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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
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).
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
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.
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?

   1.1 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: ≥ 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).
1. Experiment design
2. Basic demographics of the sample
3. Some preliminary anecdotes
Find the right company to send your money home

Find the best exchange rates and lowest fees
the site’s results page (where the action is)
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
<table>
<thead>
<tr>
<th>Service</th>
<th>Comision</th>
<th>Payment Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lucky Money</td>
<td>USD a USD: 1 $4.99 Comisión</td>
<td>Recepción 95.01 USD</td>
<td>Recibir en cuenta bancaria o efectivo</td>
</tr>
<tr>
<td>Pangea</td>
<td>USD a USD: 1 $6.95 Comisión</td>
<td>Recepción 93.05 USD</td>
<td>Recibir en cuenta bancaria</td>
</tr>
<tr>
<td>Ria Money Transfer</td>
<td>USD a USD: 1 $5 Comisión</td>
<td>Recepción 95.00 USD</td>
<td>Recibir en cuenta bancaria</td>
</tr>
<tr>
<td>Money gram</td>
<td>USD a USD: 1 $6.99 Comisión</td>
<td>Recepción 93.01 USD</td>
<td>Recibir en cuenta bancaria o efectivo</td>
</tr>
<tr>
<td>Paypal</td>
<td>USD a USD: 1 $4.2 Comisión</td>
<td>Recepción 95.80 USD</td>
<td>Recibir en cuenta bancaria</td>
</tr>
<tr>
<td>Worldremit</td>
<td>USD a USD: 1 $3.99 Comisión</td>
<td>Recepción 98.01 USD</td>
<td>Recibir en cuenta bancaria, efectivo</td>
</tr>
</tbody>
</table>
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 $\geq 50\text{ms}$).
   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
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.