using eye tracking to study migrant remittances and welfare

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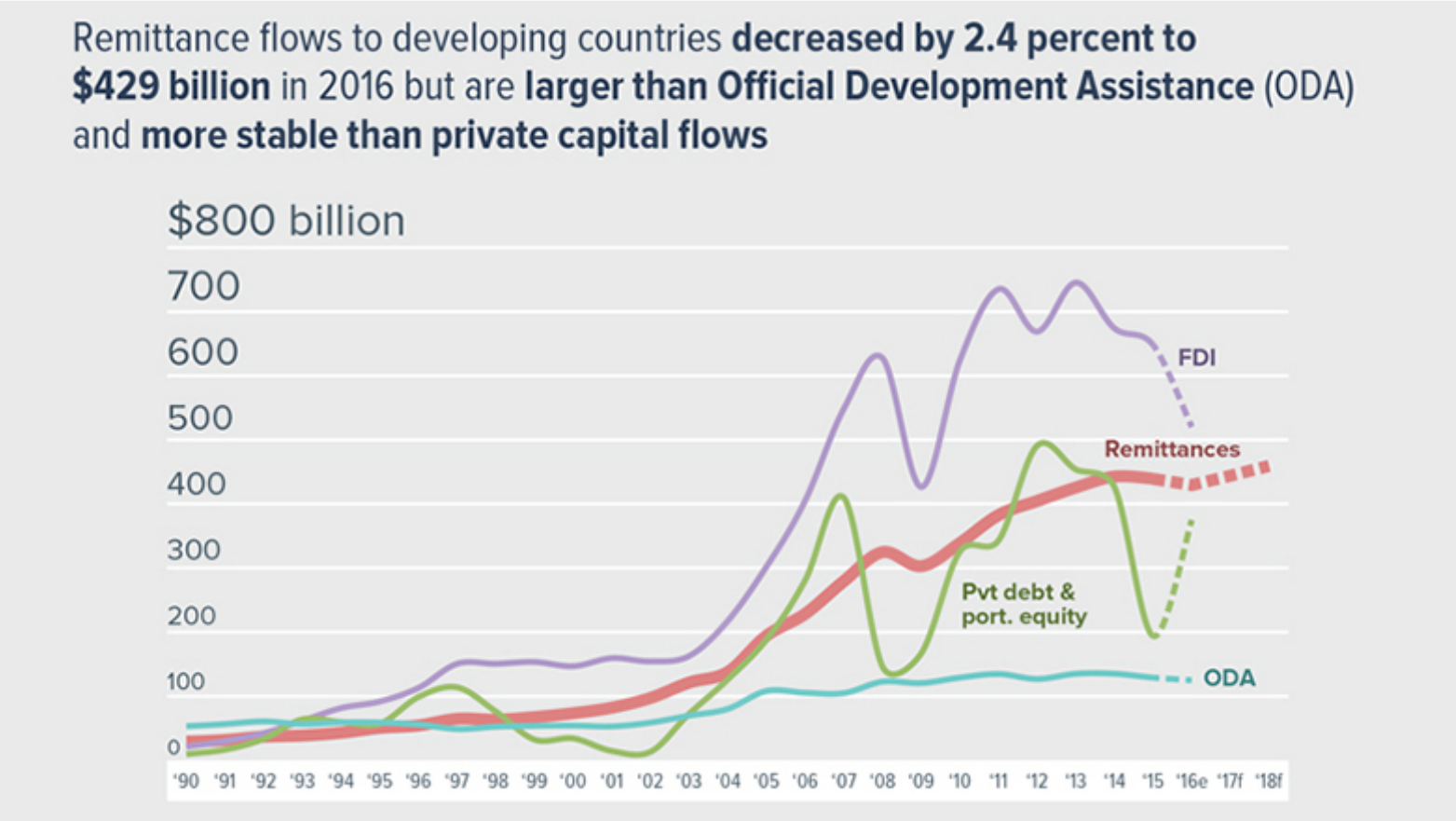
Very preliminary and very incomplete

setting expectations/disclaimer

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, not that much to say yet in terms of results
3. So, 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).



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?

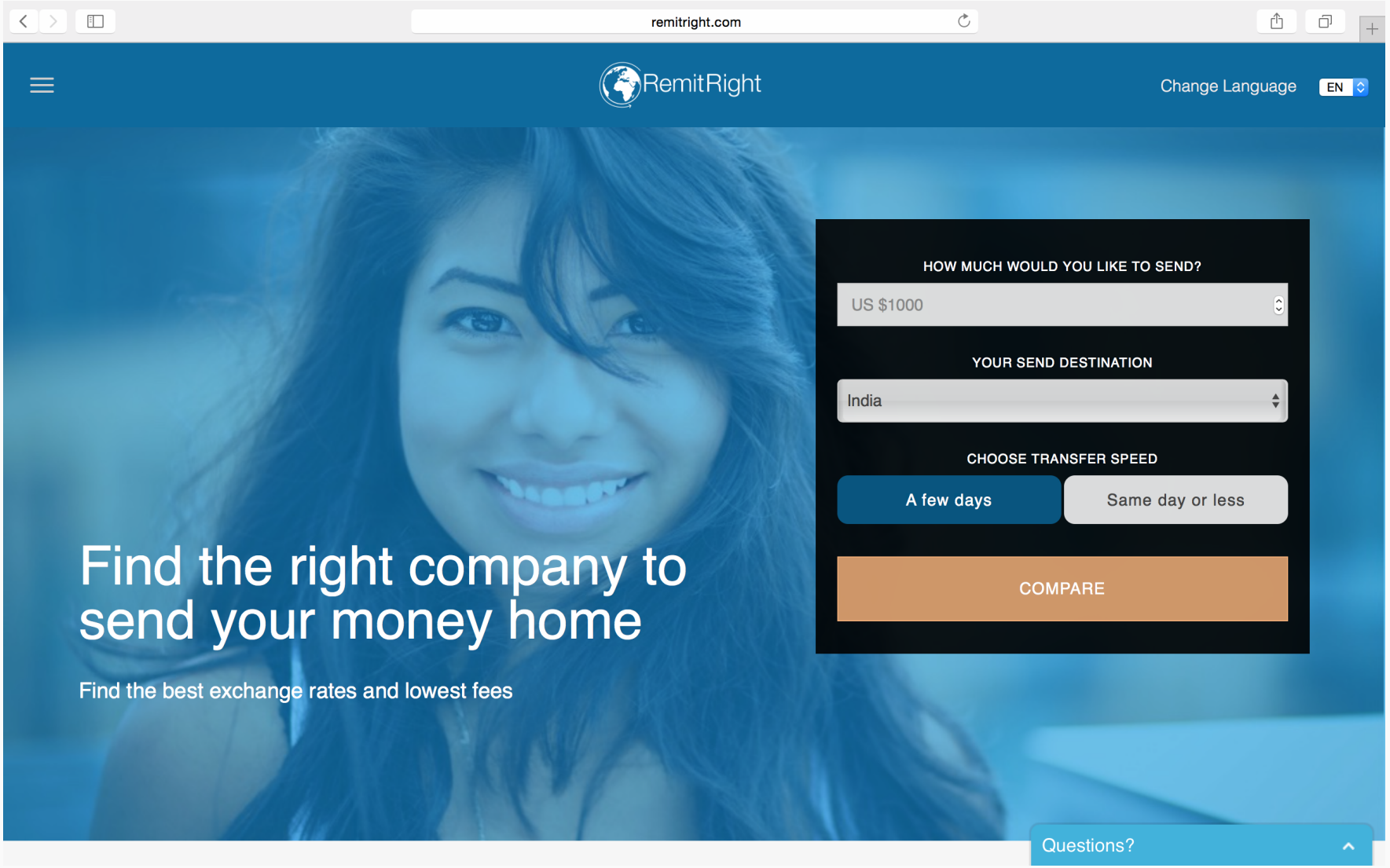
1. Partner with `www.remitright.com`.
   - 1.1 First World Bank-certified metasearch platform for online money transfers from the US to select corridors.
   - 1.2 Unlike some travel sites, you cannot "transact" via RR.
2. Phase I (May-Oct 2017)
   - 2.1 $\sim$ 380 migrants from El Salvador, Honduras, 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).

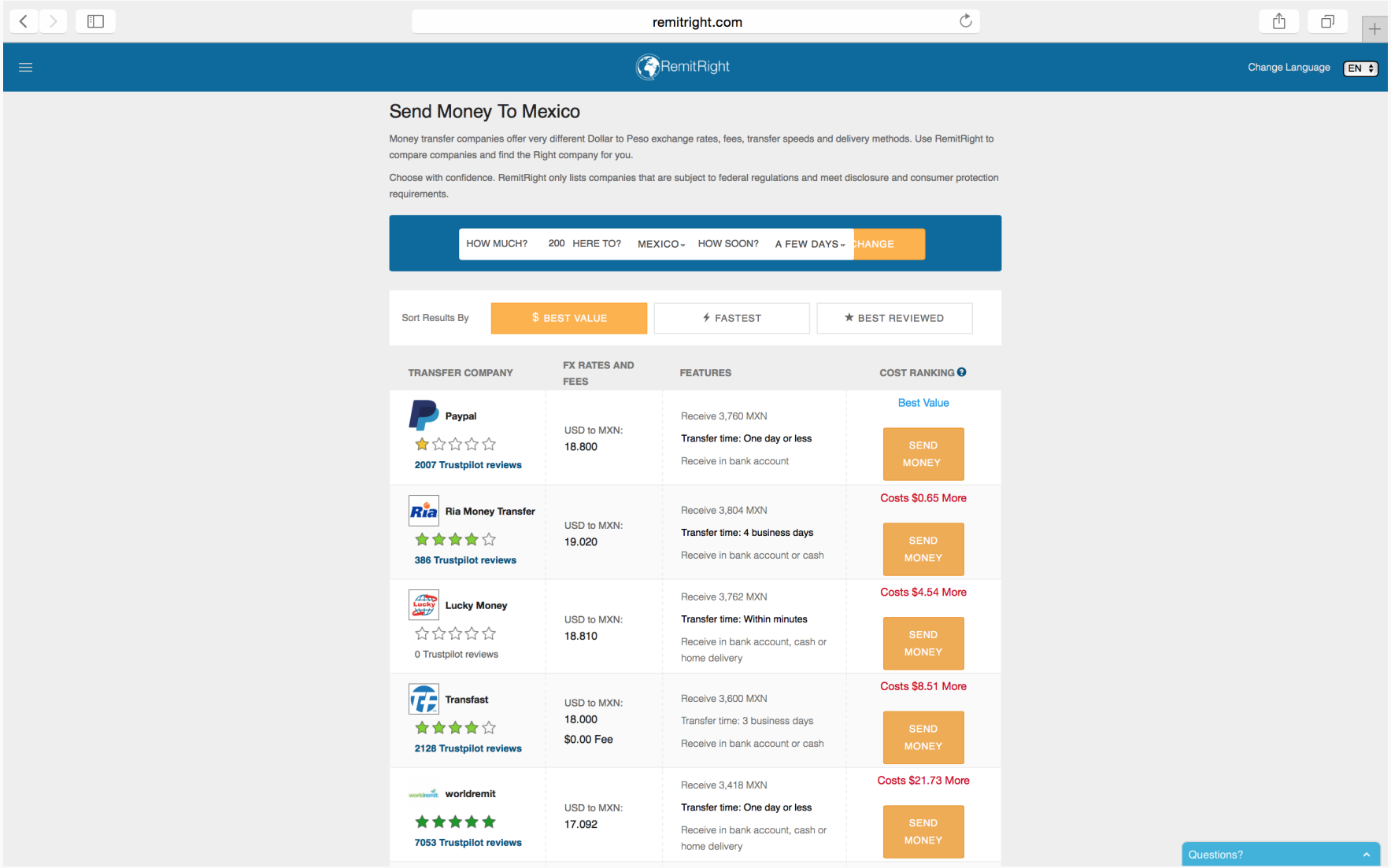
remainder of the talk

1. Experiment design
   1.1 Some context (prior literature)
   1.2 Planned analysis
2. Basic demographics of the sample
3. Some preliminary anecdotes

the site's landing page



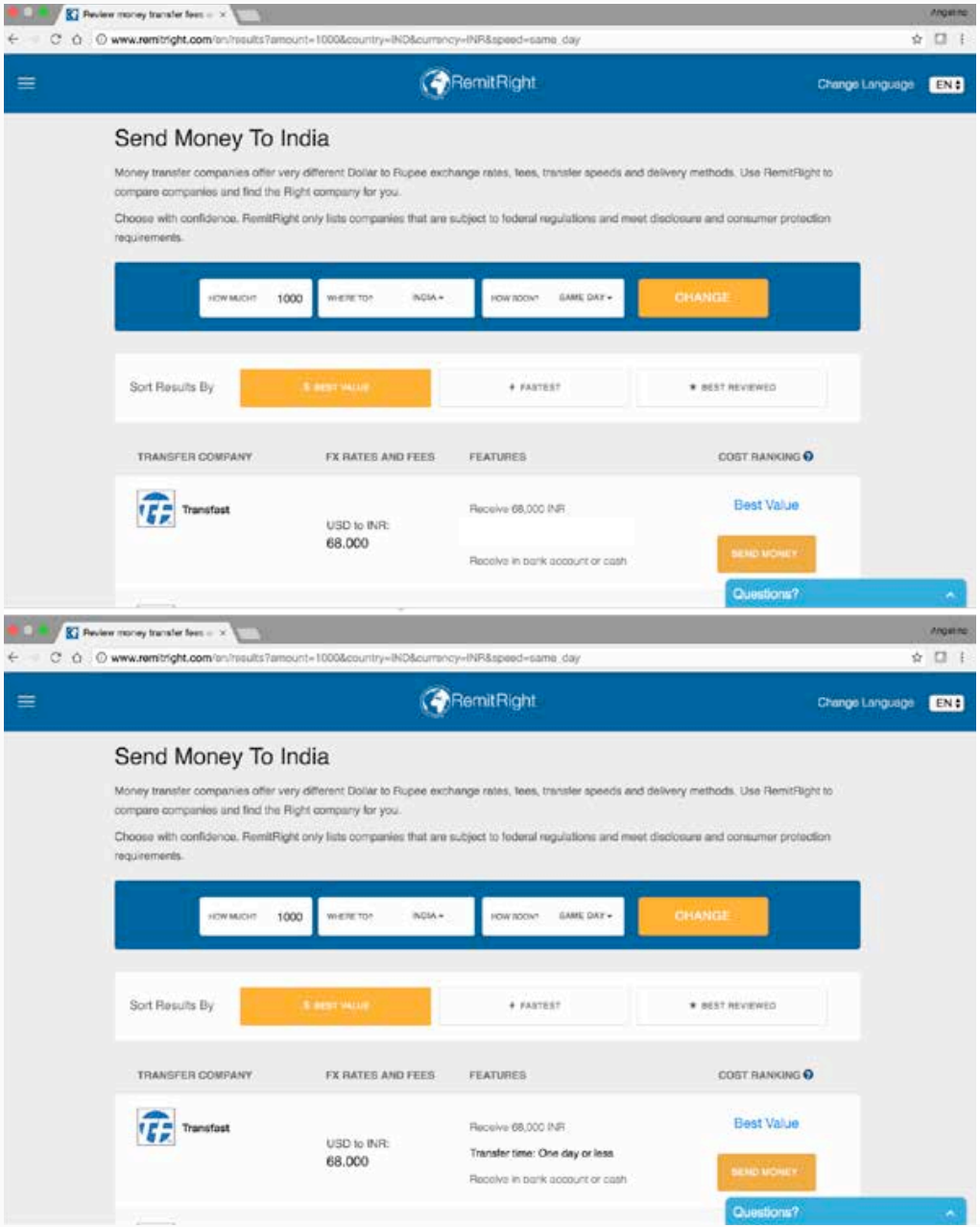
the site's results page (where the action is)



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



	$3.99 Comision	Recibir en en cuenta bancaria o efectivo	Enviar dinero
Lucky Money	USD a USD: 1 $4.99 Comisión	Recepción 95.01 USD Recibir en cuenta bancaria, efectivo, envio a domicilio	Enviar dinero
Pangea	USD a USD: 1 $6.95 Comisión	Recepción 93.05 USD Recibir en en cuenta bancaria	Enviar dinero
Ria Money Transfer	USD a USD: 1 $5 Comisión	Recepción 95.00 USD Recibir en en cuenta bancaria	Enviar dinero
Money gram	USD a USD: 1 $6.99 Comisión	Recepción 93.01 USD Recibir en en cuenta bancaria o efectivo	Enviar dinero
Paypal	USD a USD: 1 $4.2 Comisión	Recepción 95.80 USD Recibir en en cuenta bancaria	Enviar dinero
worldremit	USD a USD: 1 $3.99 Comisión	Recepción 96.01 USD Recibir en cuenta bancaria, efectivo,	Enviar dinero

Type here to search
1:15 PM
5/26/2017

some context

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


WORKERS HAVE GAINED
DRESSMAKING
ABILITIES
The World
APLACE
12

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).

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.

appendix

related literature on behavioral costs

1. This is supported by research in a range of fields (econ, mkting, psych, neuro, ...) showing that consumers:
   - 1.1 Incur information & choice overload, possibly leading to regret (Sarver 2008, Scheinebenne et al. 2010, Chernev et al. 2015).
   - 1.2 Exhibit preferences for order (Rubinstein and Salant 2006, Evers et al. 2016).
   - 1.3 Adapt search according to choice complexity & time (Reutskaya et al. 2011, Blake et al. 2016).
   - 1.4 Avoid information (Golman et al. 2016).
   - 1.5 Are sensitive to framing (Salant and Rubinstein 2008, Bertrand et al. 2010, Lusardi et al. 2014, Samek et al. 2015).
2. These issues may be particularly salient when consumers (migrants) are faced with comparison/metasearch sites.
3. Also ties into my former work, Torero and Viceisza (2015).

where does the study fall 'long' and short?

1. Main novelty and contributions
   - 1.1 Eye-tracking studies have mainly been lab-based, particularly when it concerns comparison-shopping.
   - 1.2 While there are exceptions in marketing, context does not have major potential to impact development.
   - 1.3 In the development/remittance literature, first of its type.
2. Main shortcomings (as of now)
   - 2.1 Will not study switching from brick-and-mortar directly, but infer potential costs to switching.
     - 2.1.1 Pilot studies, exposing subjects to multiple comparison sites and asking about current practices.
     - 2.1.2 Experimental findings, shedding light on behavioral constraints.
     - 2.1.3 Multiple surveys to get a better sense of practices.
   - 2.2 No direct surveys of recipient side.
   - 2.3 No IO angle – broader impacts of such sites on the industry.