Tipos de experimentos de encuesta: diseños complejos

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Sensitive question designs

Sensitive Item Designs

- Randomization can be used to measure something
- List experiments
  - Randomly present lists of items of varying length
  - Difference in count of items supported is prevalence of sensitive attitude/behavior
- Randomized response
  - Present a sensitive question
  - Use a randomization device to dictate whether the respondent answers the sensitive question or something else

List Experiments[1]

Now I'm going to read you three things that sometimes make people angry or upset. After I read all three, just tell me *how many* of them upset you. I don't want to know which ones. just how many.

1. the federal government increasing the tax on gasoline
2. professional athletes getting million-dollar salaries
3. large corporations polluting the environment

[1] Kuklinski et al. 1997. "Racial Prejudice and Attitudes Toward Affirmative Action." American Journal of Political Science 41(2): 402–419.

List Experiments[2]

Now I'm going to read you three things that sometimes make people angry or upset. After I read all three, just tell me *how many* of them upset you. I don't want to know which ones. just how many.

1. the federal government increasing the tax on gasoline
2. professional athletes getting million-dollar salaries
3. large corporations polluting the environment
4. **a black family moving in next door**

[2]Kuklinski et al. 1997. "Racial Prejudice and Attitudes Toward Affirmative Action." American Journal of Political Science 41(2): 402–419.

Randomized Response[3]

Here is a bag; in it there are stones from the game 'Go,' some colored black and others white. Please take one stone out, and see by yourself what color it is, black or white. Don't let me know whether it is black or white, but be sure you know which it is.

If you take a black one, answer the question: "Have you ever had an induced abortion?"

If you take a white one, answer the question: "Were you born in the lunar year of the horse?'

Considerations:

- Can use any randomization device
- Can be cognitively complex

[3] Blair, Imai, and Zhou. 2015. "Design and Analysis of the Randomized Response Technique." JASA 110(511): 1304–19.

Conjoint Analysis

Conjoint experiments

- Surveys measure stated preferences
- Conjoint analysis involves measuring revealed preferences based upon a series of forced-choice decisions
  - Present respondents with pairs of "profiles" containing many features
  - Force respondents to choose which of the two they prefer
- Estimate relative importance of features of each profile
- Randomization of profile features gives differences in preferences across attributes a causal meaning

Pros and Cons

- Pros
  - Reduces "cheap talk" results
  - Lower social desirability biases
  - Mimics real-world decisions
  - Revealed preferences are causally interpretable
- Cons
  - More cognitively complex for respondents than traditional polling
  - No straightforward "% support" statistics

Inmigration Example[4]

The Hidden American Immigration Consensus: A Conjoint Analysis of Attitudes toward Immigrants

Jens Hainmueller Stanford University
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Many studies have examined Americans' immigration attitudes. Yet prior research frequently confounds multiple questions, including which immigrants to admit and how many to admit. To isolate attitudes on the former question, we use a conjoint experiment that simultaneously tests the influence of nine immigrant attributes in generating support for admission. Drawing on a two-wave, population-based survey, we demonstrate that Americans view educated immigrants in high-status jobs favorably, whereas they view those who lack plans to work, entered without authorization, are Iraqi, or do not speak English unfavorably. Strikingly, Americans' preferences vary little with their own education, partisanship, labor market position, ethnocentrism, or other attributes. Beneath partisan divisions over immigration lies a broad consensus about who should be admitted to the country. The results are consistent with norms-based and sociotropic explanations of immigration attitudes. This consensus points to limits in both theories emphasizing economic and cultural threats, and sheds new light on an ongoing policy debate.

[4] Hainmueller, Jens, and Daniel J. Hopkins. 2015. "The Hidden American Immigration Consensus: A Conjoint Analysis of Attitudes toward Immigrants." American Journal of Political Science 59 (3): 529–48.

Inmigration Example

Introduction to experimental tasks:

"This study considers immigration and who is permitted to come to the United States to live. For the next few minutes, we are going to ask you to act as if you were an immigration official. We will provide you with several pieces of information about people who might apply to move to the United States. For each pair of people, please indicate which of the two immigrants you would personally prefer to see admitted to the United States. This exercise is purely hypothetical. Please remember that the United States receives many more applications for admission than it can accept. Even if you aren't entirely sure, please indicate which of the two you prefer."

Inmigration Example

	Immigrant 1	Immigrant 2
Prior Trips to the U.S.	Entered the U.S. once before on a tourist visa	Entered the U.S. once before on a tourist visa
Reason for Application	Reunite with family members already in U.S.	Reunite with family members already in U.S.
Country of Origin	Mexico	Iraq
Language Skills	During admission interview, this applicant spoke fluent English	During admission interview, this applicant spoke fluent English
Profession	Child care provider	Teacher
Job Experience	One to two years of job training and experience	Three to five years of job training and experience
Employment Plans	Does not have a contract with a U.S. employer but has done job interviews	Will look for work after arriving in the U.S.
Education Level	Equivalent to completing two years of college in the U.S.	Equivalent to completing a college degree in the U.S.
Gender	Female	Male

Inmigration Example

	Immigrant 1	Immigrant 2
If you had to choose between them, which of these two immigrants should be given priority to come to the United States to live?	○	○

On a scale from 1 to 7, where 1 indicates that the United States should absolutely not admit the immigrant and 7 indicates that the United States should definitely admit the immigrant, how would you rate Immigrant 1?

Absolutely Not Admit						Definitely Admit
1	2	3	4	5	6	7
○	○	○	○	○	○	○

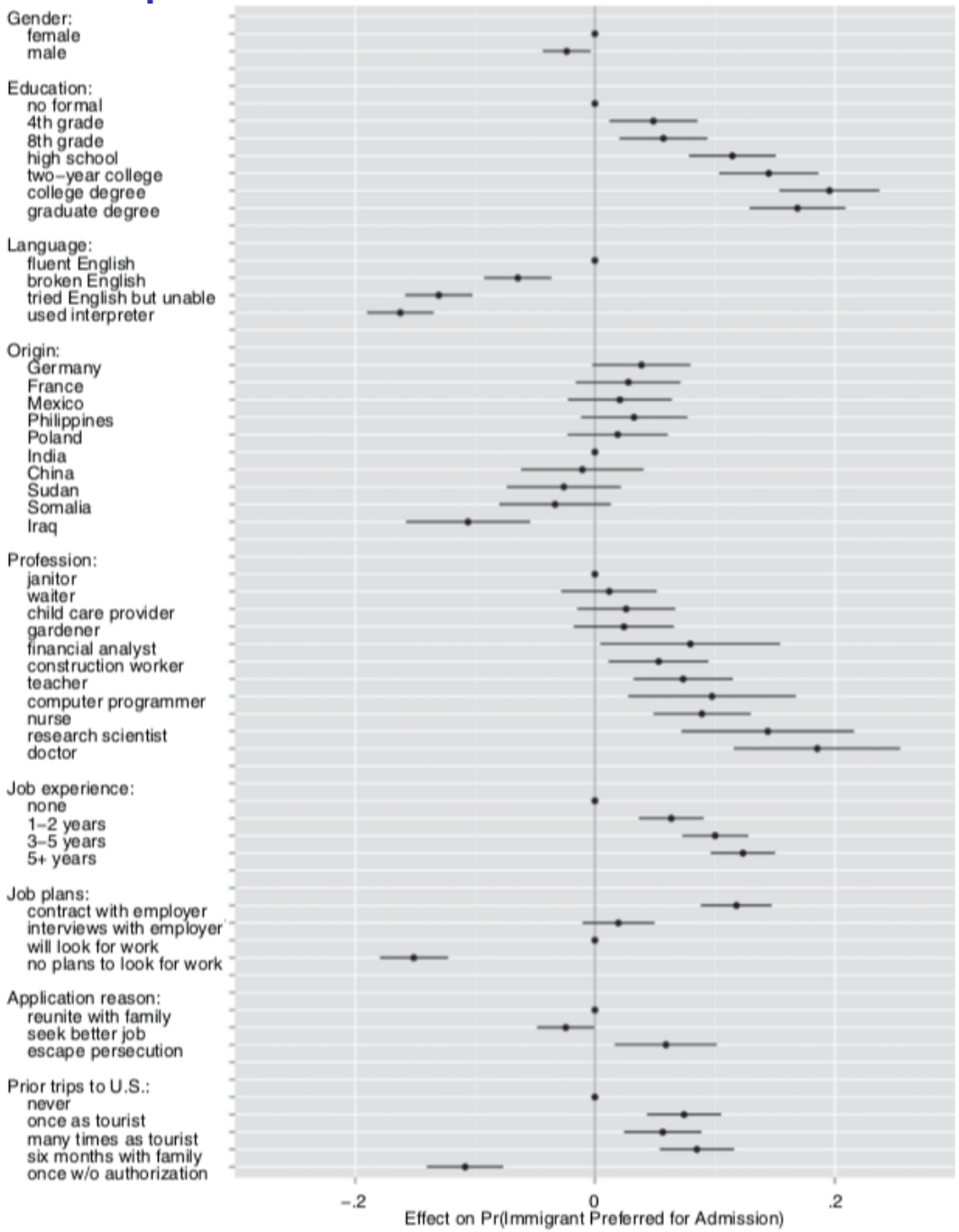
Using the same scale, how would you rate Immigrant 2?

Absolutely Not Admit						Definitely Admit
1	2	3	4	5	6	7
○	○	○	○	○	○	○

Inmigration Example

Attributes	Values
Education Level	No formal education
	Equivalent to completing fourth grade in the U.S.
	Equivalent to completing eighth grade in the U.S.
	Equivalent to completing high school in the U.S.
	Equivalent to completing two years at college in the U.S.
	Equivalent to completing a college degree in the U.S.
	Equivalent to completing a graduate degree in the U.S.
Gender	Female
	Male
Country of Origin	Germany
	France
	Mexico
	Philippines
	Poland
	India
	China
	Sudan
	Somalia
	Iraq
Language	During admission interview, this applicant spoke fluent English
	During admission interview, this applicant spoke broken English
	During admission interview, this applicant tried to speak English but was unable
	During admission interview, this applicant spoke through an interpreter
Reason for Application	Reunite with family members already in U.S.
	Seek better job in U.S.
	Escape political/religious persecution
Profession	Gardener
	Waiter
	Nurse
	Teacher
	Child care provider
	Janitor
	Construction worker
	Financial analyst
	Research scientist

Inmigration Example : Results



Conjoint experiments: design issues

- Randomization of attributes (think about the profile distribution)
  - Full randomization gives a uniform multivariate distribution
  - Differences with the MVD in the population
  - Weighted randomization such that some values would be drawn more frequently than others
  - Restricted randomization
  - Consequences for the estimation of AMCE
- Randomization of attribute ordering
  - causal effects of attributes themselves can be separately identified from pure order effects
  - Reshuffling Cognitive demanding
  - Randomly order attributes in the first table, and fix the order throughout the rest of the experiment

Conjoint experiments: design issues

- Number of profiles
  - Paired-profile designs tend to perform well compared to single-profile designs
- Number of tasks
  - It is safe to use as many as 30 tasks on respondents from MTurk and Survey Sampling International's online panel without detectable degradation in response quality (Bansak et al., 2018)
- Number of attributes
  - trade-off between masking and satisficing
  - Bansak et al. (2019) provide evidence that subjects resist even 10 attributes well.

Conjoint experiments: design issues

- Outcome measures
  - Individual rating
  - Forced choice outcomes

AMCEs

Statistic of interest is the *average marginal component effect* (AMCE), which is the causal effect of each level of each feature on support for an overall profile.

AMCE: *The effect of a particular attribute value of interest against another value of the same attribute while holding equal the joint distribution of the other attributes in the design, averaged over this distribution as well as the sampling distribution from the population.*

Estimación:

- Nonparametric
- OLS with dummy variables for each attribute value

We can estimate this using (dummy variable) OLS, assuming:

- Full randomization of attributes and randomized pairing of profiles
- Even presentation of levels w/in features
- No profile ordering effects

Implementing a Conjoint

Hope someone else can do it for you! - Requires programming - Not possible to manually create all possible combinations

- Strezhnev et al.'s tool: https://github.com/astrezhnev/conjointsdt
- Alex Meyer's conjoint for Qualtrics https://github.com/acmeyer/Conjoint-for-Qualtrics-Offline
- Leeper's Example of conjoint experimental Design in Qualtrics: https://github.com/leeper/conjoint-example

Questions?

Write a pre-analysis plan

A complete planning document for how to design, implement, and analyze an experiment

- Consider the EGAP form in the course materials. This is a general guide for experiments.
- In your survey experiment example, make sure you are considering:

1. Theory/hypotheses
2. Instrumentation
   - Manipulation(s)
   - Outcome(s)
   - Covariate(s)
   - Manipulation check(s)
3. Sampling
4. Implementation
5. Analysis