How do survey respondents decide whether to consent to data linkage?

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Acknowledgements

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• Funders
What we knew about consent
Selected findings

- Many respondents do not understand request \([1][2]\)
- Half of non-consenters say ‘yes’ if asked again \([3][4]\)
  - Decision is not fixed, can be influenced
- Multiple consents asked in one interview: latent willingness to consent \([5][6]\)
- But not when consents asked in different interviews \([7]\)
  - Situational factors important

How do respondents decide whether to consent?
Conceptual framework
Based on

• Qualitative interviews: *Understanding Society* respondents
  Factors that influence consent decision [8]

• Cognitive model of survey response process
  How Rs answer survey questions [9] [10]

• Survey methods literature
  Consent to data linkage, experiments

• Rational vs heuristic decision making
  System 1 vs system 2 processing [11] [12]

• Real-life decision making
  People reduce amount of information considered [13]
Conceptual framework
How respondents decide whether to consent

Background Characteristics:
• Experience
• Knowledge
• Cognitive capacity
• Attitudes
• ...

Organisations Involved:
• Data holder
• Survey team

Survey Design:
• Content and format request
• Context (mode)
• .....
Hypotheses
How respondents decide whether to consent

- Decision made within a limited time frame (survey interview)
- And with incomplete information

**H1:** Rs predominantly use heuristic decision processes

**H2:** Decision processes differ in the amount and nature of information used in making decision

**H3:** Processes differ across individuals and contexts

**H4:** Different processes are associated with differences in consent propensities and understanding of request
Data

• Consent to link to tax records
  Standard question text used in *Understanding Society*
  Question explains what, why, how
  ....*Do you give permission for us to pass your name, address, sex and date of birth to HMRC for this purpose?* (Yes/No)

• Questionnaires
  Background questions
  Follow-up questions about consent decision

• Surveys (2018 / 2019)
  *Understanding Society* Innovation Panel (IP)
  PopulusLive online access panel (AP)

<table>
<thead>
<tr>
<th></th>
<th>Sample sizes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP</td>
<td>web</td>
</tr>
<tr>
<td></td>
<td>face-to-face</td>
</tr>
<tr>
<td>AP</td>
<td>sample 1 wave 1</td>
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<tr>
<td></td>
<td>sample 1 wave 2</td>
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<tr>
<td></td>
<td>sample 2</td>
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</tbody>
</table>
**H1: Rs predominantly use heuristic decision processes**

How did you decide whether to say “yes” or “no” in response to the question about data linkage?

Please select all that apply:

1. I thought about what would happen if I said “yes” or “no” *(consequence)*
2. Instinct or gut feeling *(gut)*
3. I said what I usually say when I’m asked for information that is very personal *(habit)*
4. I thought about how much I trust the organisations involved *(trust)*
5. Something else

Percent of respondents:

<table>
<thead>
<tr>
<th>Reasoning Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequence / Trust</td>
<td>38%</td>
</tr>
<tr>
<td>Gut feeling / Habit</td>
<td>37%</td>
</tr>
<tr>
<td>Other / Combination</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: Access Panel 1.2.

**H1: supported**

Only ~ 1/3 respondents reflective decision
Aside
Are self-reported decision processes valid?

- **Less reflective decision** (habit / gut feeling)
  vs. **more reflective** (consequence / trust)

Consent question answered more quickly

<table>
<thead>
<tr>
<th>paradata, 4 web surveys</th>
<th>seconds:</th>
</tr>
</thead>
<tbody>
<tr>
<td>23-30</td>
<td>vs. 33-81</td>
</tr>
</tbody>
</table>

Less likely to click on links to leaflet or diagram explaining linkage (paradata)
Lower self-reported effort to answer consent question (scale 0-10)

**Self-reported decision process measures genuine differences between respondents**
**H2:** Processes differ in the amount and nature of information used in making decision

<table>
<thead>
<tr>
<th>When you were deciding whether or not to allow your data to be linked, how much of a role did each of the following aspects play in your decision? (1 Played no role, ...., 5 Played very big role)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• List of 14 aspects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consequence vs. gut / habit</th>
</tr>
</thead>
<tbody>
<tr>
<td>More likely to consider:</td>
</tr>
<tr>
<td>&quot;What information the government has about me&quot;</td>
</tr>
<tr>
<td>&quot;How much I trust the organisations involved&quot;</td>
</tr>
<tr>
<td>&quot;The benefits to society&quot;</td>
</tr>
<tr>
<td>• Consider larger number of aspects</td>
</tr>
</tbody>
</table>

**H2: supported**
H3: Processes differ across individuals and contexts

- Consequence decision
  7-15 percentage points more likely if has degree (vs lowest education)

- Trust decision
  17-22 percentage points more likely if age 60+ (vs 16-40)

- Consent question design – n.s.
  Early vs late in questionnaire
  Easy vs standard reading difficult
  Trust priming

Over time (12 months between surveys)

- Respondents used same decision process in wave 2 as wave 1:
  56% of consequence / trust decision makers
  54% of habit/gut feeling decision makers

H3: some evidence
H4: Different processes are associated with differences in consent propensities and understanding of request

Consent rate (%):

- Consequence: 53%
- Cons. + Trust: 89%
- Trust: 83%
- Gut feeling: 41%
- Habit: 20%

Consequence / trust decision makers have better understanding

- Objective understanding
  - 8 true/false test questions about the data linkage
- Subjective understanding
  - *How well do you think you understand what would happen with your data...*
  - (4-point response scale)

Source: Access Panel 1.2

H4: supported
Not causal effect!
Decision process
Mediates effect of background characteristics

Background Characteristics:
- Experience
- Knowledge
- Cognitive capacity
- Attitudes
- ...

Organisations Involved:
- Data holder
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Survey Design:
- Content and format request
- Context (mode)
- .....
Conclusion

• Respondents vary in how they make consent decision
  More reflective processes vs.
  Less reflective, more rapid, instinctive processes

• Decision processes vary in
  Type and amount of information the decision is based on

• Which process respondents use
  Depends to some extent on respondent characteristics (education, age)
  But varies within respondents over time
  Contextual influences?
Implications

• **Majority do not use reflective process**
  - Unlikely to read additional information materials
  - Base decision on fewer aspects
  - Make decision very quickly
  - Providing more information about the linkage unlikely to increase informed consent

• **Reflective decision makers (consequence / trust)**
  - More likely to consent and have better understanding of linkage request
  - But not necessarily causal effect!
  - Is it possible to shift respondents to consequence or trust-based decision making?
  - Would that increase informed consent?
References I


Thank you for listening

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Project papers:
• Multiple consents
• Consent and modes
• Consent decision (in progress)
• Consent wording (in progress)

More information: