Validity of Subjective Paradata
Results from the National Educational Panel Study and HISBUS Online Access Panel

Background
Paradata, such as user agent strings (UAS), provide online researchers with important client-side information about the technical conditions of web surveys and respondent's behavior. According to § 4 Federal Data Protection Act (FDPA) each respondent would have to consent to the collection, processing and use of this personal data. Such an Informed Consent (IC) could make secondary data research difficult due to privacy concerns. Consequently, the National Education Panel Study (NEPS) team decided to directly ask for paradata instead of relying on the automatically collected UAS. This made paradata part of the regular survey data.

To date it is completely unclear whether web survey participants are able and willing to deliver UAS information. Questions for the device used and its configuration might be too demanding for less technically-minded respondents. Besides, they may not want to give any information about their device features and it would also be conceivable that they intentionally make false disclosures.

Therefore, we would like to pursue two research questions:

1. Do our web survey participants provide information about their device and its configuration?
2. How accurate are these self-reported paradata?

Data
At the beginning of the 5th online survey of the NEPS - Starting-Cohort "First-Year-Students" we directly asked all participants for the device used (n=6,998). At the end of the survey the remaining 6,557 participants were asked for the device-switch, the operating system and web browser.

The HISBUS Online Access Panel was a good opportunity to test the validity of these self-reported paradata. At the end of the survey the remaining 3,125 participants were directly asked for:
- device used (PC/Notebook, Smartphone, Tablet, Others),
- operating system (Windows, Mac, Linux, Android, Others) and
- web browser (Firefox, Chrome, Safari, IE/Edge, Opera, Others).

Additional information:
- UAS were collected at the beginning of the survey and categorized according to the device they used first.
- At the end of the survey the participants were directly asked about their device, operating system and web browser.
- More than one quarter of the participants used a PC/Notebook.
- The switch to a modernized visual layout of the online survey was a good opportunity to test the validity of these self-reported paradata.

Methods
1. NEPS and HISBUS survey data on device and its configuration will be presented
2. HISBUS survey data and UAS information will be compared

Results
Device Used

Operating System

Web Browser

More than one quarter of the NEPS and HISBUS participants stated to use mobile devices.
- In both studies there were no refusals to answer the item.
- The self-reported HISBUS data on the device used are almost identical with the UAS data (97.9%).

In both samples there were no refusals to answer the items operating system and web browser.
- With respect to operating system the HISBUS data are highly related (97.0%).
- The congruence is smaller regarding web browser (90.3%).

Conclusions
There is a high willingness to provide information about the device used and its configuration and a high consistency between the self-reported data and the UAS.

Directly asking web survey participants is a promising way to get valid information about their technical equipment if UAS data are not available.

BUT further research is needed, because results are not generalizable
- HISBUS panelists are very survey experienced and willing to give information
- the willingness to provide information may decrease with the number of surveys
- HISBUS data were collected within a methodology survey

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References:
Methodenbericht: HISBUS-Startkohorte S – Online- oder Panel-Methode… data from a survey that addressed panel maintenance and survey methods in winter 2017/2018

Literature:
Federal Data Protection Act § 4 (1) “The collection, processing and use of personal data are only permitted to the extent that this law or other legal provision allows or orders this or the person concerned has consented”, https://www.gesetze-im-internet.de/bdsg_1990/__4.html.
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