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Do we still need non-response follow-ups to web surveys of the UK general population? An analysis of cost-quality trade-offs

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Motivation | Shift to mixed-mode involving web in the 2010s

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Increasing use of **web-first designs** to reduce survey costs with an **additional mode** (interviewer-administered or paper self-completion) to minimise coverage and non-response bias and increase response rates (e.g., Jäckle et al. 2015; Biemer et al., 2022).

A methodological change accelerated by the **COVID-19** pandemic.

Understanding Society
Longitudinal | ISER

Transitioned from **face-to-face** to **web-first** with a CAPI follow-up starting at wave 8 (2017-19) (Carpenter and Burton, 2017).

Next Steps
Cohort Study | CLS

At wave 5 (2008), implemented a sequential mixed-mode design: web → CATI → CAPI (Calderwood and Sanchez, 2016).

Community Life Survey
Cross-sectional | Department for Culture, Media & Sport

In the 2016-17 edition, it shifted to a sequential web and paper self-completion design (Kantar Public, 2017).

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Motivation | Web mode in an ever-changing context

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- Shifting to web-first mixed-mode designs uncovered new **challenges**:
  - **Data quality.** Mode effects as respondents might answer the questions differently in different modes. Unclear how to deal with mode effects in estimation (e.g., Vannieuwenhuyze et al., 2014; Maslovskaya et al., 2023; Burton and Jäckle, 2020).
  - **Survey costs.** Increasing **fixed survey costs** since data collection requires setting up different modes – questionnaire scripting and testing, sample management, data processing (e.g., Vannieuwenhuyze, 2013).
- Increase in **internet access** and **digital literacy** in the UK.
  - In 2024, **94% of the UK adult population** had Internet access at home, a 4 p.p. increase from 2020 and an 18 p.p. increase from 2011 (Ofcom, 2011; 2020; 2024).

Motivation | Is it time for web-only surveys?

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A few previous experiments have explored the possibility of using web-only surveys to study the general population:

- Some studies have shown that a **follow-up mode is required** to reach some population sub-groups (e.g., Moore et al., 2024; Brown and Calderwood, 2020).
- Other experimental studies suggest that **web-only surveys could be used to study the general population** (e.g., Cornesse et al., 2022; Christmann et al., 2024).
- However, the most recent evidence was collected **before or during the Covid-19 pandemic**.

RQs | Quality-costs trade-offs of web-only surveys of the UK general population

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- **RQ1 |** Who does not **use the internet**? Who does not **respond to web surveys** of the UK population? How are biases changing over time?
- **RQ2 |** How much does **following up web non-respondents** in other modes reduce biases? Has this changed over time? Are follow-ups more important for hard-to-survey groups?
- **RQ3 |** Are the gains in reducing biases outweighed by **measurement differences** between modes? Have **cost structures** for web-mixed-mode surveys changed?
- **RQ4 |** Can biases in web surveys of the UK general population be corrected by **weighting**? Has the effectiveness of weighting changed over time?

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RQ1a | Digital divide as a barrier for web-only surveys

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BACKGROUND

Internet access, **digital literacy**, or **internet use behaviour** can hinder web response (Van Deursen et al., 2015).

Some **sub-groups** of the population are more likely to be **excluded from the internet** (e.g., older people), which might affect the representativeness of web surveys.

RESEARCH AIMS

Explore 1) the level of **internet exclusion over time** (2015-22) and 2) the **differences between the online and offline sub-populations** over time in the UK/GB.

METHODS

We will use the samples of **respondents to the UKHLS main study** and a measure of the **frequency of internet use**.

Coefficients of Variation (CVs) will be used to estimate the level of representativeness of the online and offline sub-populations.

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Internet exclusion has been declining in the UK

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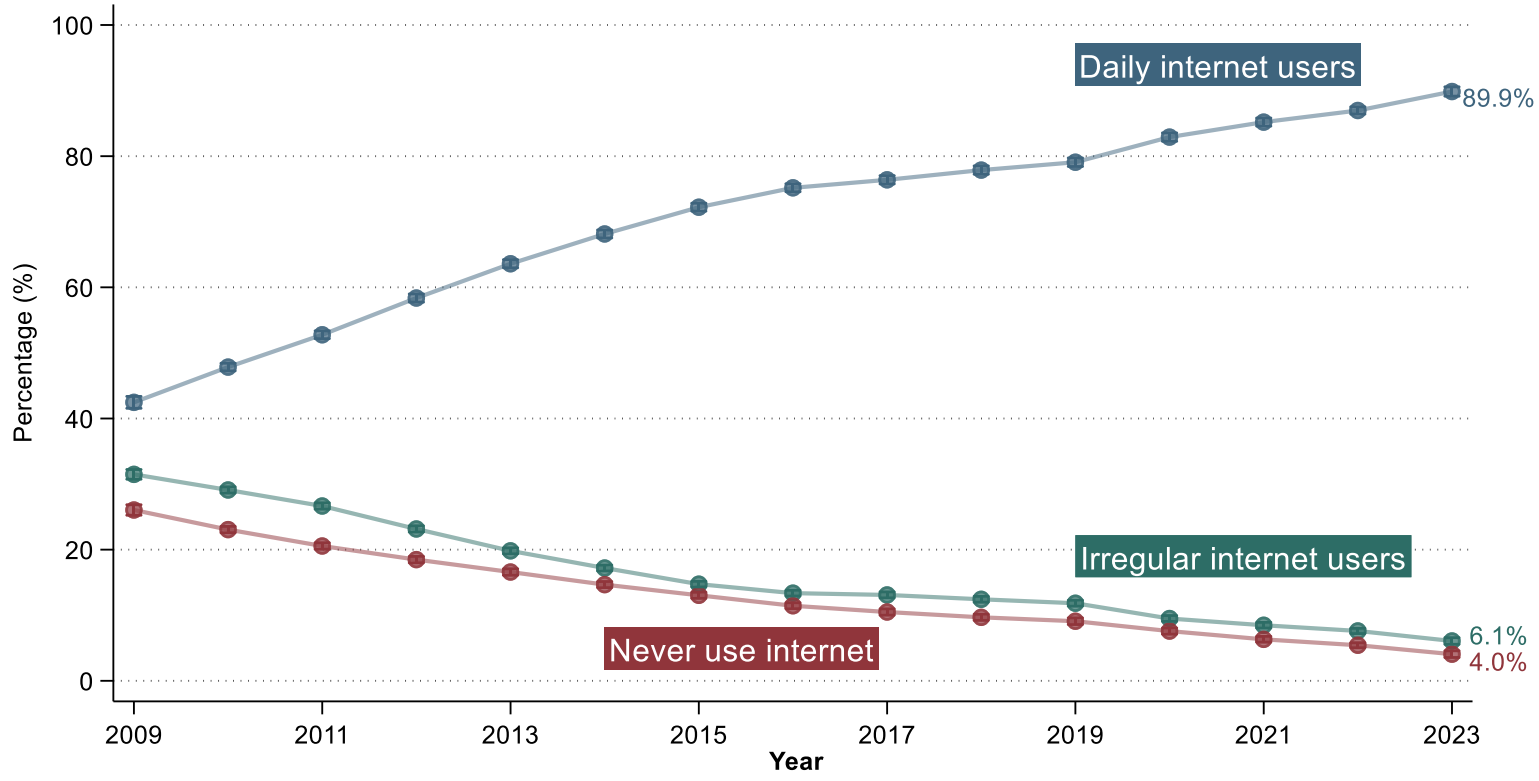
Frequency of **internet use** in the UK by year



Cross-sectional analysis of UKHLS main study (2009-23).

UK adult population (16+).

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RQ1b | Web non-respondents and representativeness

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BACKGROUND

Web surveys result in **lower response rates** than other modes, and web response can vary across population sub-groups (e.g., Diakeler et al., 2020).

RESEARCH AIMS

Explore who does **not respond to web surveys** and how web non-response affects **representativeness over time** (2015-2022).

METHODS

UKHLS (Innovation Panel and main study) random sub-samples issued to web-first to evaluate the level of representativeness of **web-only.**

Coefficients of Variation (CVs) will be used to assess the representativeness of the web-only respondents.

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Web-only surveys are becoming increasingly representative

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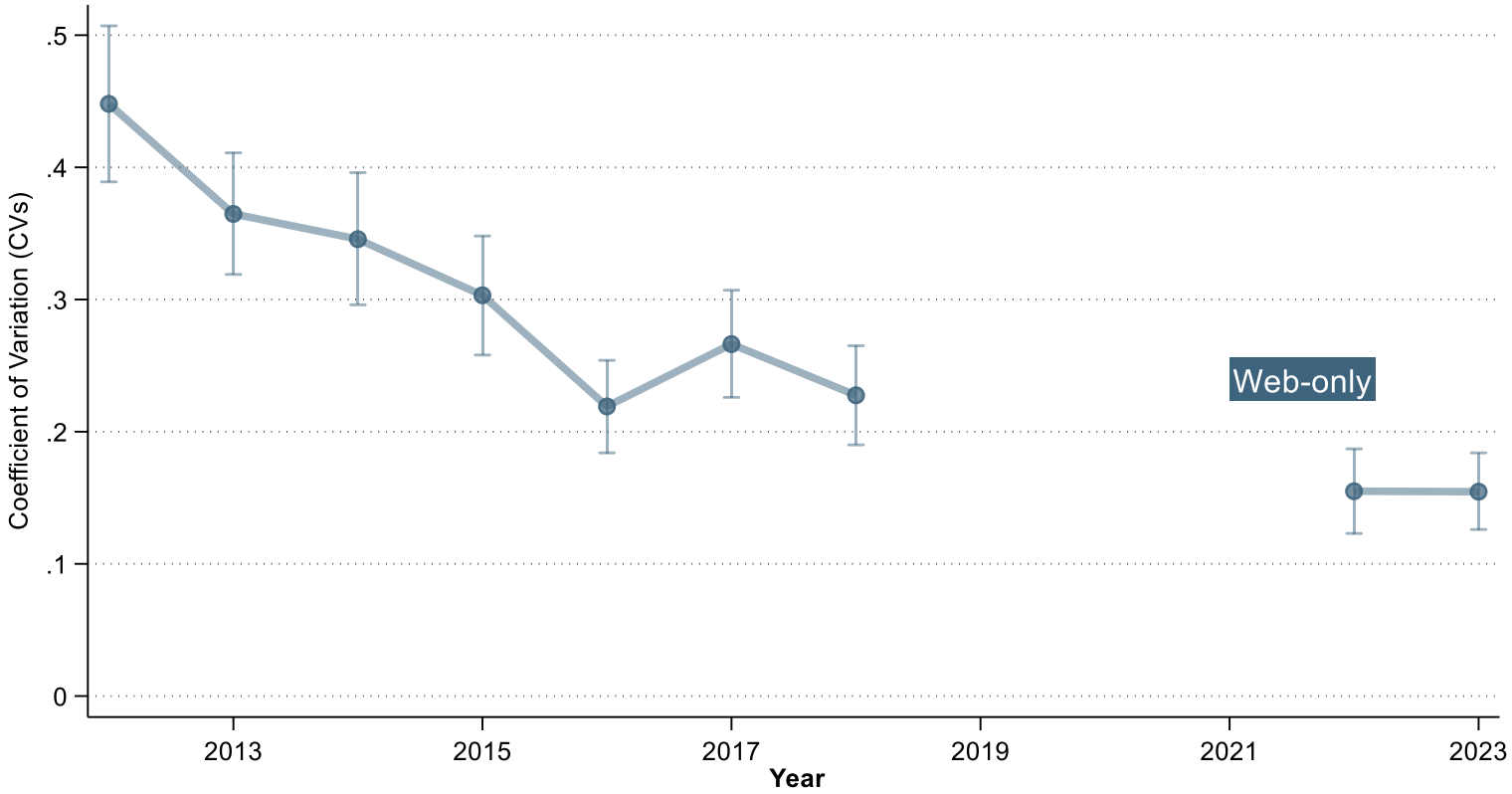
Web-only **sample representativeness (CVs)** over time



Cross-sectional analysis of UKHLS IP study (2012-23).

GB adult population (16+).

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RQ2 | Web non-respondents and representativeness

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BACKGROUND

Follow-ups using an alternative mode (CAPI, CATI or mail) have been used to increase response rates and **minimise coverage and non-response bias** (e.g., Jäckle et al. 2015; Calderwood and Brown, 2020).

RESEARCH AIMS

Evaluate whether the **levels of representativeness** of the web-only and the web + CAPI/CATI samples differ and how this difference has evolved in the last decade.

METHODS

UKHLS has used a **web-first and CAPI** (CATI during the pandemic) sequential design.

This design will allow us to evaluate how the follow-up has helped improve representativeness over time using **coefficients of variation** .

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Do CAPI follow-ups still improve representativeness?

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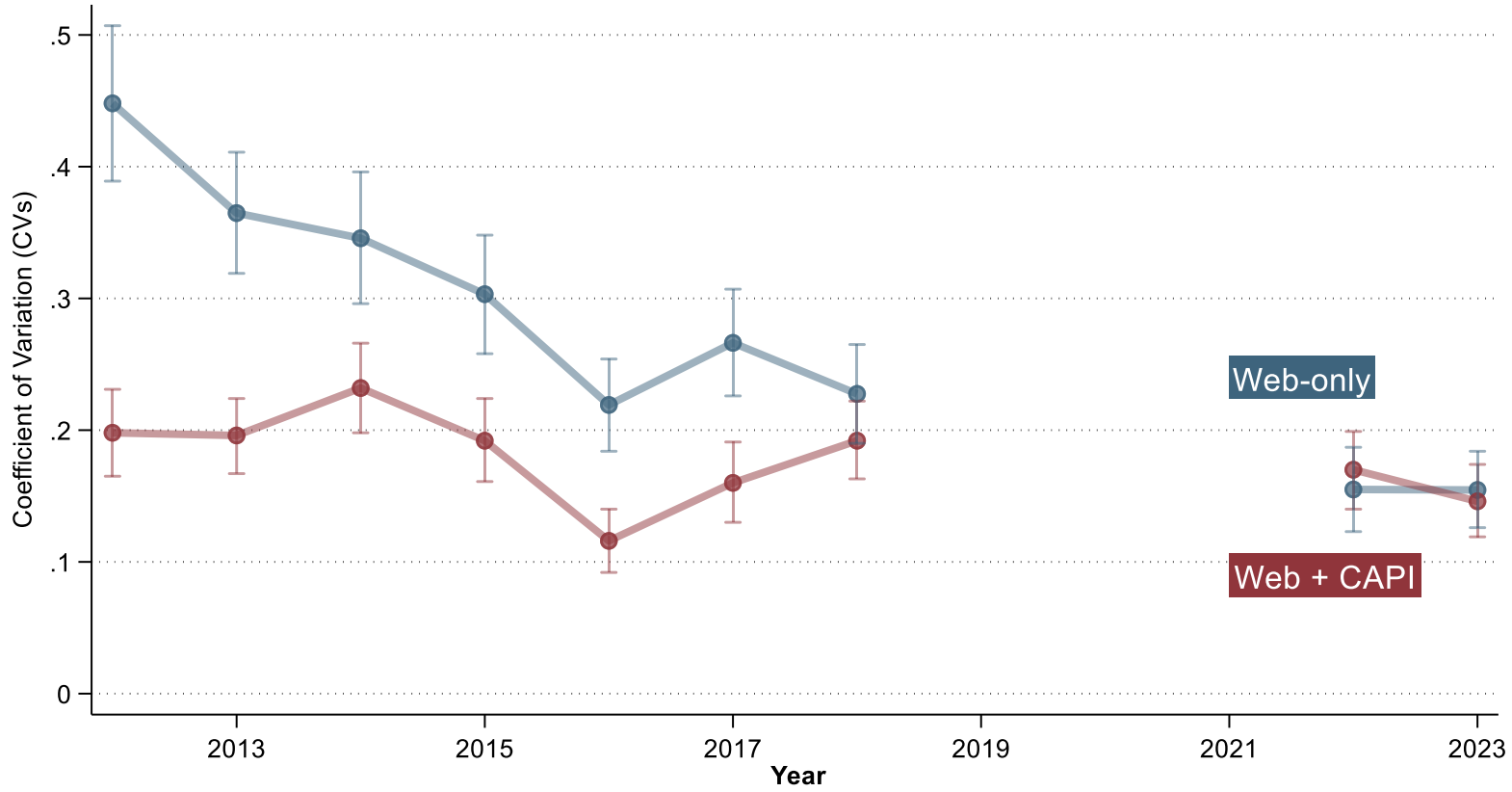
Web + CAPI **sample representativeness (CVs)** over time



Cross-sectional analysis of UKHLS IP study (2012-23).

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Some early thoughts

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The part of the population **not using internet** has dropped significantly in the last fifteen years, but some subgroups remain excluded (e.g., some older people…).

The **representativeness of web-only surveys** of the UK general population has **increased over time**. *Who are those not responding to web surveys?*

The **CAPI follow-ups** used to improve sample representativeness, but it is unclear if this is the case anymore. *Are there any sub-groups in the population that can benefit from follow-ups?*

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Thank you!

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