SURVEY FUTURES

SURVEY DATA COLLECTION METHODS COLLABORATION

Report 12: Recruitment methods for surveys without field interviewers in the UK: Evidence review

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March 2026

Survey Futures is an Economic and Social Research Council (ESRC)-funded initiative (grant ES/X014150/1) aimed at bringing about a step change in survey research to ensure that high quality social survey research can continue in the UK. The initiative brings together social survey researchers, methodologists, commissioners and other stakeholders from across academia, government, private and not-for-profit sectors. Activities include an extensive programme of research, a training and capacity-building (TCB) stream, and dissemination and promotion of good practice. The research programme aims to assess the quality implications of the most important design choices relevant to future UK surveys, with a focus on inclusivity and representativeness, while the TCB stream aims to provide understanding of capacity and skills needs in the survey sector (both interviewers and research professionals), to identify promising ways to improve both, and to take steps towards making those improvements. Survey Futures is directed by Professor Peter Lynn, University of Essex, and is a collaboration of twelve organisations, benefiting from additional support from the Office for National Statistics and the ESRC National Centre for Research Methods. Further information can be found at www.surveyfutures.net.

Research Strand 4 of Survey Futures ("Methods for surveys without field interviewers"), led by Professor Olga Maslovskaya (University of Southampton), focuses on the challenges associated with self-completion general population surveys in both cross-sectional and longitudinal contexts. The strand explores ways to optimise design characteristics, with the aim of achieving more representative samples of the general population. The main challenges associated with self-completion general population surveys are associated with the absence of field interviewers to facilitate recruitment and retention of participants and, additionally in a UK context, the absence of a sampling frame of named individuals. Research Strand 4 has five sub-projects:

(1) Recruitment methods.
(2) Targeted survey procedures.
(3) Population subgroups.
(4) Knock-to-nudge
(5) Within-household selection methods.

This report should be cited as:

Domarchi C, Ndebele N, Maslovskaya O, Fitzgerald R, Lynn P, and Comanaru R (2026) 'Recruitment methods for surveys without field interviewers in the UK: Evidence review', *Survey Futures Report* no. 12. Colchester, UK: University of Essex. Available at https://surveyfutures.net/reports/.

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Executive summary

Survey agencies are moving towards online data collection, as response rates have been falling and fieldwork costs have been increasing. The COVID-19 pandemic provided an opportunity to move some surveys to self-administered modes with unprecedented speed and expedited existing transformation plans. However, not many social surveys made the transition, and several returned to face-to-face interviewing as soon as it was feasible to do so.

This evidence review focuses on recruitment practices for self-administered surveys, aiming to identify methods for optimising design characteristics that achieve good cooperation rates and more representative samples of the general population. It aims to summarise evidence regarding methods used to recruit samples for self-completion surveys. The evidence is of two kinds: evidence from the academic literature on the effectiveness of different approaches and design features, and evidence from technical reports on the approaches and design features that are used in practice on UK surveys.

The main findings of our review are the following:

- **Survey mode:** Mixed-mode designs improve response rates, increase sample representativeness, and reduce survey costs compared to single-mode surveys. In mixed-mode surveys, web-mail sequential designs do not significantly boost overall response rates compared to web and mail concurrent designs, but they increase the proportion of web responses and lower cost per response.
- **Communication strategy:** Prenotifications improve response, particularly for older respondents in mail surveys, and two or three reminders are optimal. The effectiveness of replacing a reminder with a prenotification is inconclusive and evidence suggests that it is the extra mailing that is effective rather than the type of mailing. Shorter intervals between contacts are more effective. Messages based on social exchange theory (emphasising legitimacy and low burden) outperform those based on personal appeals. University logos are more effective than government or commercial ones.
- **Materials and access:** Envelope design appears to have limited impact on response rates, except that windowed envelopes displaying a cash incentive improve recruitment. While providing questionnaire access via URLs is the dominant approach in UK survey practice, offering multiple access options (including QR codes) can improve response.
- **Incentives:** Incentives are crucial for response and representativeness. Monetary incentives (e-vouchers) are the most common practice in the UK. However, cash incentives are more effective than vouchers and other non-monetary incentives. Although conditional incentives are preferred in UK practice for cost-effectiveness, unconditional ones are more effective in boosting recruitment. Strategies combining both unconditional and conditional incentives are more effective compared to conditional or unconditional incentives alone. Differential and early-bird incentives have been successfully used to engage harder-to-reach groups.
- **Implementation:** While UK survey practitioners generally adhere to these evidence-based guidelines, real-world implementation often encounters practical challenges, including budget constraints and tight timelines. For example, some surveys offer a single response mode (rather than the recommended mixed-mode approach), not all

the surveys reviewed provide incentives to participants, and some offer limited questionnaire access options. This gap between theoretical best practices and operational realities highlights the need for recruitment strategies that strike a balance between methodological rigour and fieldwork feasibility.

1 Introduction

Data collection organisations are undergoing a paradigm shift, with social surveys experiencing major transformations in their design and implementation. Prior to the COVID-19 pandemic, agencies had started moving towards online data collection, as response rates had been falling and fieldwork costs were increasing. The pandemic provided an opportunity to move some surveys to self-administered modes with unprecedented speed and expedited existing transformation plans. However, not many social surveys made the transition (some of them just paused the data collection during the pandemic), and several returned to face-to-face interviewing as soon as it was feasible to do so.

Research Strand 4 of Survey Futures ("Methods for surveys without field interviewers") focuses on the challenges associated with self-completion general population surveys in both cross-sectional and longitudinal contexts. One of the subprojects of this research strand focuses on exploration of recruitment practices, aiming to identify methods for optimising design characteristics that achieve good cooperation rates and more representative samples of the general population. This review aims to summarise evidence regarding methods used to recruit samples for self-completion surveys. The evidence is of two kinds: evidence from the academic literature on the effectiveness of different approaches and design features, and evidence from technical reports on the approaches and design features that are used in practice in UK surveys. To provide this evidence, two reviews have been carried out as part of this research programme:

1) A review of the academic literature available on the effectiveness of recruitment practices in self-completion surveys that used address-based sampling fames (henceforth termed *literature review*). The literature search addressed recruitment practices, recruitment of underrepresented populations, response rates, and survey costs. It was focused on surveys in the UK but also included evidence from other developed countries that used address-based sampling. The literature review is reported in Chapter 2.

2) A review of survey practice in the UK, based primarily upon analysis of information contained in technical reports of self-completion surveys conducted during the last five years (henceforth called *survey practice review*). The review focused on contact and recruitment practices and was based on publicly available reports and survey materials as well as information provided directly by UK survey agencies. The survey practice review is reported in Chapter 3.

2 Published literature

2.1 Review objectives and structure

The objectives for this literature review are to:

- Identify research literature that speaks to the effectiveness of different recruitment practices in terms of response rates and sample representativeness, for self-completion surveys that use address-based sampling frames. Effects for both the total population and population subgroups are in-scope and information about costs of different practices are reported where possible.
- Review the evidence from the literature to inform a survey practice guide for recruitment in surveys without field interviewers in the UK.

This first section has outlined the objectives of the literature review, and the second section will describe the search strategy for gathering the literature, including the search terms used and inclusion criteria for the material considered. This is followed by the 'communication approaches' section which focuses on theoretical approaches for designing communication materials in survey methodology. This considers the tailored design method and the respondent-centred design approach (Dillman, Smyth, and Christian 2014; Wilson and Dickinson 2022), along with other approaches in the literature. The fourth section focuses on recruitment strategies, highlighting the invites and reminders, mode of response, recruitment materials, incentive strategies, and questionnaire design. The fifth section considers the impact of recruitment strategies on survey quality indicators, including representativeness, and survey costs. The last section summaries findings from the literature.

2.2 Literature search strategy

A systematic search was conducted between January – June 2024 to identify research literature on self-completion surveys that used address-based sampling frames. The search also specifically considered recruitment practices in survey methodology, literature on underrepresented populations, response rates, as well as survey costs. This involved a search of the Web of Science, Scopus, International Bibliography of the Social Sciences, APA PsycINFO, and Academic Search Ultimate bibliographic databases. The search strategy involved setting out the terms to searching the bibliographic databases and included the following:

- A search in all searchable fields for the terms 'surv* method*' AND 'address-based sampl*' AND 'self-administ* surv*' OR 'self-complet* surv*'.
- A topic search in titles, abstracts, keyword plus (exact phrases) and author keywords for the terms "mixed-mode surv*" OR "mixed mode surv*" AND "push-to-web" OR "web-push" AND "web surv*" OR "online surv*" OR "internet surv*" OR "web mode" AND "paper surv*" OR "mail surv*" OR "mail mode".
- Other keyword searches included the terms 'population subgroup*', 'response rate*', 'survey cost*', 'survey recruit*', 'underrepresented population*'.

The search was further refined by document type and included articles, review articles, early access papers, book chapters, as well as proceedings papers, reports and some grey literature. While the focus of this project is on the UK, which uses address-based sampling frames for most surveys of the general population, the search included literature from other countries that also use address-based sampling frames. In addition to England, Northern Ireland,

Scotland, and Wales, studies from other European countries (Austria, Bulgaria, Cyprus, Czech Republic, Greece, Lithuania, Portugal), the United States of America, and Australia were considered. Literature was limited to that written in English only. The search was also limited by years of publication, with literature published between 2017 to June 2024 considered. This resulted in 69,416 documents being identified for further review. However, key literature on survey methods before this period was also used for reference.

The documents were then screened by title and abstract to exclude substantive papers focusing on the subject matter of the survey, and these made up a substantial number of documents on the initial list. Studies that used non-probability-based sampling methods were also excluded, including those that used commercial online survey panels or recruitment via social media platforms. This resulted in 211 documents that were considered for a more detailed review.

2.3 Communication strategies

This evidence review gives primacy to the *tailored design method* (Dillman et al. 2014) and the *respondent centred design* approach (Wilson and Dickinson 2022). The *tailored design method* has been widely used in survey methodology to achieve high response rates, obtain more representative samples, and produce high-quality survey data. In contrast, *respondent centred design* is a relatively new approach, developed as part of work undertaken by the Office for National Statistics (ONS) in the UK, with the aim of integrating user experience design with survey design principles (Wilson and Dickinson 2022). The review also summarises other relevant theories and Dillman's (2020) critique of their application to survey participation.

2.3.1 Tailored design method

The *total design method*, introduced by Don Dillman in 1978, aimed to standardise the step-by-step process of data collection for sample surveys conducted via mail or telephone. At the time, surveys were primarily associated with in-person interviews (Dillman 2020; Dillman et al. 2014). In 2000, the method was renamed the *tailored design method* to reflect the growing recognition that data collection strategies need to be adapted to suit different survey contexts. This shift emphasised moving away from a one-size-fits-all approach and instead designing surveys that consider factors such as the topic and target population (Dillman 2020; Dillman et al. 2014; de Leeuw and Hox 2008).

The *tailored design method* has three fundamental considerations. First, it emphasises reducing survey errors that may affect data quality, including coverage, sampling, nonresponse, and measurement errors. Second, it focuses on creating effective survey procedures, such as recruitment strategies and questionnaire design, that work together to encourage participation. Finally, it integrates social exchange theory, a framework for communication that uses the concepts of rewards, costs, and trust to enhance survey response rates (Dillman et al., 2014). Social exchange is a theoretical framework developed by Blau (1964), Homans (1961), and Thibaut and Kelly (1959) as a general model for understanding how people behave in their interactions with one another, and to understand how social norms develop to guide those interactions (Dillman et al. 2014; Greenberg and Dillman 2023; de Leeuw and Hox 2008).

Applied to survey methodology, social exchange theory assumes that respondents are more likely to complete a questionnaire, and do so accurately, if they believe the rewards of participating outweigh the costs (Dillman et al. 2014; Greenberg and Dillman 2023; de Leeuw and Hox 2008). Rewards, both psychological and material, may include incentives, personalised letters, and the opportunity to contribute to a socially important cause. Additionally, expressing appreciation for participation and designing visually appealing questionnaires can further increase the perceived value of responding. Costs, which may also be psychological or material, are reduced by ensuring the survey is concise, visually well-designed, and easy to complete. Avoiding complex, uncomfortable, or overly personal (sensitive) questions is essential to reducing the burden on respondents. Finally, trust is fostered through transparent communication, emphasising the legitimacy of the survey's sponsor, assuring confidentiality, and using professional design elements (Dillman et al. 2014; de Leeuw and Hox 2008).

2.3.2 Respondent centred design

Respondent centred design (Wilson and Dickinson 2022) is adapted from the well-established *user centred design* approach which has its roots in user experience and interface design from the computer technology world (Pacheco 2019). This approach places users of a service or product at the heart of the design process, ensuring that development meets their needs. User needs are identified through research that explores their habits, thoughts, questions, behaviours, and expectations. These insights are then used to inform and guide each stage of the design process. By focusing on needs-based development, services or products remain user-centred rather than being built on assumptions.

In respondent centred design, although the needs of data users and analysts are considered, they do not dictate or influence the respondent's experience of the survey or its accompanying products. This marks a shift from the traditional, data user-driven approach to a transformative, respondent-driven approach and importantly, Wilson and Dickinson (2022) thought this approach would meet the needs of both data users and respondents simultaneously.

The respondent centred design encompasses ten key components, beginning with understanding the needs of data users, mental models of how people think, feel and how this influences behaviour, and the experiences and needs of respondents. The approach emphasises a data-driven design that incorporates both quantitative and qualitative insights, focuses on developing surveys with an appropriate tone, readability, and language that can be completed independently, without additional guidance. It also promotes an 'optimode' strategy, optimising surveys for different delivery modes, adopting adaptive design methods, and incorporating 'cogability' testing, which blends cognitive and usability assessments. Finally, it champions inclusive design principles to ensure accessibility for all users (Wilson and Dickinson 2022) and, if applied to initial communications, is likely to make people more receptive to being recruited.

2.3.3 Other approaches

2.3.3.1 Cognitive dissonance theory

Leon Festinger's theory of cognitive dissonance (1957) was one of the first attempts to explain why people respond to surveys. Dillman (2020) stated that according to this theory, people strive for consistency, or cognitive consonance. Therefore, if responding to a survey aligns with

how individuals perceive themselves, they are more likely to participate. The theory further suggests that a person's characteristics and pre-existing psychological states play a significant role in determining whether they will respond.

Dillman (2020) argued that although cognitive dissonance theory may help explain why some people choose to respond to a survey request while others do not, it is limited as a practical framework because it does not directly translate into actionable strategies for increasing or decreasing survey response rates. According to Dillman (2020), encouraging individuals to act consistently with their past behaviour is unlikely, on its own, to be sufficient to motivate participation. Rather, a holistic approach that combines cognitive dissonance with external influences, such as tailoring features of survey design to the known attributes of those receiving the request, is more likely to improve response rates (Dillman 2020).

2.3.3.2 Reasoned action and planned behaviour theory

The theory of reasoned action and planned behaviour (Fishbein and Ajzen 1980) suggests that attitudes influence behaviour by shaping a person's intentions. Like cognitive dissonance theory, it emphasises the characteristics of the individual receiving the survey request. According to Dillman (2020), this theory argues that the link between attitudes and actions holds when the decision to act, such as completing a survey, is fully within the respondent's control. Therefore, individuals with a positive perception of a survey are more likely to respond.

The theory primarily concentrates on the preexisting beliefs and attitudes of potential respondents, while also considering the influence of subjective norms that may encourage or discourage participation. These beliefs can be shaped by factors such as the survey's topic or announced survey length. However, this connection has not been clearly established when applying this theory to survey response research. Moreover, this theory does not cover other structural elements of survey design that almost always affects response rates. Instead, it narrowly focuses on whether the respondent's internal social and psychological attitudes towards the survey are positive or negative (Dillman 2020).

2.3.3.3 Adult-to-adult communication theory

The adult-to-adult communication theory was developed by Comley (2006) based on his personal experiences. He suggested that adopting an adult-to-adult communication style, rather than treating potential respondents as if they were children, would lead to better response rates. The emphasis is on how surveys are communicated, encouraging respectful and non-demeaning language, and avoiding statements like 'you must respond to this request today,' which can sometimes appear in survey invitations (Dillman 2020).

Dillman (2020) expressed that the strength of this theory was in its focus on how the way survey requests are communicated can impact response rates. However, it lacks empirical data to support its effectiveness. Furthermore, by concentrating solely on communication, it overlooks other survey designs features that can influence response rates. Nonetheless, the value of this theory is in its shift of focus from the general attitudes of survey recipients to how the communication itself can be tailored to encourage responses (Dillman 2020).

2.3.3.4 Gamification theory

Gamification theory is another communication-focused theory developed by Puleston (2012). It aims to make surveys more engaging by turning them into enjoyable experiences for respondents. The goal is to make surveys feel like games, possibly offering rewards such as

badges or points for completing them (Puleston 2012). Dillman (2020) highlighted that this approach seemed particularly targeted at younger respondents, who are familiar with and appreciate computer games. However, the use of gamification is limited by its narrow focus on communication, without considering other factors that could influence response rates (Dillman 2020).

2.3.3.5 Influence theory

Herbert Kelman (1953), a social psychologist, introduced an early conceptualisation of three factors that influence how an individual resolves dilemma, which could be applied to understanding why someone might choose to respond or not respond to a survey request. Robert Cialdini (1984) later explored various strategies for influencing people's behaviour in different contexts and identified six key principles that individuals commonly use when deciding whether to comply with requests from others:

- First, **reciprocation** which suggests that when someone does something helpful for another person, there is a natural tendency to return the favour.
- Second, **consistency** and that a person is likely to behave in a given situation in a way that mirrors their previous actions.
- Third, **social validation**, suggesting that people may also rely on a general reference point, choosing to act based on what they believe someone else in a similar situation would do.
- Fourth, **authority**, where people are more likely to comply with requests when they come from someone in a position of authority.
- Fifth, **scarcity** which suggests that people are more inclined to act if they are told the opportunity is limited or scarce.
- Finally, **liking**, suggesting that personal enjoyment of the task they are being asked to do can motivate people to respond to requests (Cialdini 1984).

According to Dillman (2020), influence theory has notable limitations when applied to survey participation. It was not developed with surveys in mind and provides little empirical evidence or formal experimentation related to survey response behaviour. Additionally, the theory pays little attention to how multiple influence principles might be combined to enhance effectiveness, and it does not account for contemporary survey challenges, such as the shift toward self-administered and internet-based methods. Dillman (2020) argued that as a result, while theoretically rich, the influence theory has restricted practical applicability in the context of modern survey methodology.

2.3.3.6 Leverage saliency theory

Leverage saliency theory (Groves, Singer, and Corning 2000) builds on the heuristic concepts introduced by Groves et al. (1992) and earlier response framework ideas from Groves and Couper (1998). The core concept of leverage-saliency is that certain survey attributes can have a positive impact on response rates, while others may have a negative effect. Additionally, different survey attributes are likely to motivate individuals to either respond or not respond. By identifying which attributes are more consequential for a particular person, the survey designer can enhance response rates by making the positive attributes more prominent, effectively leveraging them to increase the likelihood of a response (Groves et al. 2000).

According to Dillman (2020), a challenge with applying this theory is that it assumes survey designers can identify, which survey attributes are most relevant to specific individuals,

allowing those attributes to be effectively leveraged. However, in most surveys, prior contact to gather such detailed information about individuals is usually not feasible (Dillman 2020).

2.3.3.7 Benefit-cost theory

Singer (2011), who helped develop leverage-saliency theory, later introduced a broader theory of survey participation. She argued that individuals choose to participate in a survey when they believe the benefits outweigh the costs. This theory is broad in that it suggests people make decisions to act when, based on their personal judgement, the perceived benefits exceed the costs (Singer 2011), similar to the premise of social exchange theory (Dillman 2020; Dillman et al. 2014). Additionally, Singer (2011) acknowledged that such decisions can either be made through careful reasoning or quickly using heuristics.

Dillman (2020) argued that this theory provided valuable insight into the balance between benefits and costs, particularly by encouraging surveys to be viewed in terms of this balance rather than considering either aspect in isolation. However, he also highlighted that it overlooks the role of trust and does not specifically address the practical aspects of designing and implementing surveys to maximise response rates (Dillman 2020).

2.3.3.8 Prospect theory

Prospect theory (Kahneman and Tversky 1979, 1984) is a general theory of decision-making that posits individuals are more strongly influenced by the desire to avoid negative outcomes than by the prospect of achieving positive ones (Lynn 2019). Two tenets of the theory are particularly relevant to survey researchers. First, individuals tend to frame choices in terms of gains or losses relative to their current position rather than in terms of their final outcomes. Consequently, evaluations of what is objectively the same outcome may differ depending on whether it is presented as a gain or a loss relative to the status quo (Tourangeau and Ye 2009). Second, people are typically more sensitive to losses than to gains of the same objective size. In the terminology of prospect theory, "the value function for losses is steeper than the value function for gains" (Kahneman and Tversky 1979, p. 279).

Prospect theory therefore has implications for how survey participation requests may be framed (Tourangeau and Ye 2009) and how individuals decide whether to take part (Lynn 2019). The theory suggests that emphasising the potential losses associated with nonparticipation may be more persuasive than highlighting the gains associated with participation (Tourangeau and Ye 2009).

Tourangeau and Ye (2009) conducted an experiment in which respondents from a random digit dialling sample were asked to complete a second telephone interview. Around half were given a message emphasising the benefits of completing the follow-up interview, while the remainder received a message stressing the potential loss if they chose not to participate. Drawing on Kahneman and Tversky's prospect theory, Tourangeau and Ye (2009) predicted that loss framing would be more effective than gain framing. Their results supported this prediction, with loss framing producing a higher response rate than gain framing. Lynn (2019) also tested the prospect theory in relation to participation in a mixed-mode panel involving CAPI or web surveys. Findings similarly indicated that the framing of the participation request affected the likelihood of response in line with prospect theory, although this effect was observed only among relatively recent panel entrants (Lynn 2019).

2.3.3.9 Pre-suasion theory

Cialdini (2016) developed the concept of pre-suasion; a communication strategy aimed at making people more receptive to a message before they encounter it. The basic idea is that what individuals focus on first shapes how they experience subsequent information, thereby allowing communicators to influence behaviour by strategically guiding attention towards concepts associated with the desired outcome. Pre-suasion can be seen as 'front-loading' attention to create favourable conditions for compliance (Cialdini 2016).

The process of pre-suasion involves a sequence of several key factors:

1. **Establish trust** – Trust is crucial for compliance but must be established before making a request (Cialdini 2016). Unlike general social exchange theory, which links trust to organisational credibility, the pre-suasion theory emphasises personalised trust, such as sharing personal experiences or information from the study director (Greenberg and Dillman 2023).
2. **Create a privileged moment** – Cialdini (2016) argues that in the pre-suasion theory, fundamentally, the factor most likely to determine a person's choice in a situation is the one that has been elevated in attention just before a decision is made. By elevating attention to reasons aligned with the desired behaviour, communicators can increase compliance. Privileged moments can be created at various stages, such as when recipients see an envelope, read a cover letter, notice an incentive, or receive follow-up contacts (Greenberg and Dillman 2023).
3. **Transition from attention to importance** – The pre-suasion theory also suggests that humans assign greater importance to ideas when their attention is turned to that topic (Cialdini 2016). By directing attention to specific reasons to respond, pre-suasion transforms the privileged moment into actionable motivation. In survey research, this involves linking attention to reciprocity (for example, upfront incentives) and the establishment of trust. A potential implication of this approach is that researchers could shift potential respondents' attention toward aspects of the response task, rather than continuing to offer diffuse reasons for responding (Greenberg and Dillman 2023).
4. **Command continued attention** – The pre-suasion theory also relies on identifying elements that naturally capture and sustain attention, referred to as 'magnetisers' such as the element of mystery and novelty, to encourage engagement (Cialdini 2016). For example, hinting at an intriguing question within the survey can motivate respondents to complete it rather than abandoning it mid-task (Greenberg and Dillman 2023).

In essence, pre-suasion is about strategically guiding recipients' attention before a request to increase the likelihood of compliance. By establishing trust, creating privileged moments, emphasising the importance of key ideas, and sustaining attention through compelling cues, communicators can significantly enhance responses and achieve desired behaviours (Greenberg and Dillman 2023).

2.4 Recruitment strategies

2.4.1 Mode of response

Questionnaires can be administered using a single mode or through mixed-mode designs, which may be concurrent or sequential (Dykema et al. 2013; Olson et al. 2019). Evidence from the literature suggests that mixed-mode designs can enhance survey outcomes by improving response rates, increasing sample representativeness, and reducing survey costs (Dillman 2017; Dillman et al. 2014; Dykema et al. 2013; de Leeuw 2018; Lynn 2020; Olson et al. 2019). However, mixed-mode designs can increase survey complexity and costs and may introduce mode effects in responses.

2.4.1.1 Factors that affect response rates to mail and web questionnaires

In general, response to a survey request can be affected by many factors and while some factors may be common between mail and web questionnaires, there are mode-specific factors. The table below outlines factors that can affect response rates of mail and web questionnaires.

Table 1: Factors that affect response rates to mail and web questionnaires

Factor	**Mail questionnaires**	**Web questionnaires**
Visual design	High-quality printing, formatting, and paper boost credibility.	Responsive design increases engagement, especially on mobile.
Personalisation	Handwritten or personalised letters significantly improve response.	Personalised emails (e.g., name, tailored message) increase open or click rates.
Prenotification	Mailed letters or postcards before the survey help set expectations.	Email or SMS alerts before the survey increase likelihood of participation.
Reminders	Follow-up mailings (postcards, letters) are effective but cost more.	Email reminders are inexpensive and often essential for boosting response.
Incentives	Cash or gift cards included in the envelope are highly effective.	Digital rewards (e.g., e-gift cards) can work well; lotteries less so.
Ease of completion	Requires physical effort (writing, mailing); can deter some respondents.	Can be completed quickly with clicks; easier for those comfortable with technology.
Anonymity and privacy	Often perceived as more private and trustworthy.	Concerns about tracking and data security can deter participation.
Sender credibility	Official-looking envelopes and logos boost trust and legitimacy.	Recognised domains and institutional branding help assure respondents.
Demographics	Older, rural, and less computer literate individuals are more responsive.	Younger, urban, and computer literate individuals respond more often.
Device compatibility	Not applicable (paper)	Questionnaire optimised for mobile devices will improve response.

Source: Adapted from Callegaro et al. (2015) and Dillman et al. (2014).

2.4.1.2 Mail versus web surveys

In their meta-analysis reviewing self-completion surveys using mail and web mode designs, Weigold et al. (2019) found higher odds of response among surveys completed using paper-and-pencil than the computer. A meta-analysis by Daikeler et al. (2020) examined experimental studies that compared response rates of the web surveys and those of other modes, including paper. Results indicated that, on average, web surveys yielded lower response rates than other survey modes (Daikeler et al. 2020). This was also supported by evidence from the systematic review by Anhang Price et al. (2022), which found lower response rates in web-only surveys compared to other single-mode surveys, including mail-only surveys. However, other studies found positive outcomes in the use of the web mode. In their study, Bretschi et al. (2023) found that offering the web mode with the initial contact resulted in higher cumulative web completion rates compared to offering web and mail modes concurrently. Other studies suggested that offering the web mode had the effect of increasing response rates among sample members with the highest levels of education, while this had no effect among those with the lowest levels of education (Heimel, Medway, and Horwitz 2024).

2.4.1.3 Mixed-mode

While the primary focus of this evidence review is self-completion surveys and mixed modes in this context (specifically web and mail), some studies included mixed-mode strategies that involved interviewers. The literature suggests that mixed-mode designs have the potential to improve survey recruitment outcomes (Dillman 2017; Dillman et al. 2014; Dykema et al. 2013; de Leeuw 2018; Lynn 2020; Olson et al. 2019); however, experimental evidence is inconsistent in terms of the most effective design.

In their systematic review, Anhang Price et al. (2022) found that sequential mail-telephone protocols yielded substantially higher response rates compared to single-mode designs (mail, telephone or interactive voice response which is an automated phone system technology in which survey responses are captured by touch-tone keypad selection or speech recognition). Furthermore, sequential web-mail-telephone protocols achieved similar or higher response rates than sequential mail-telephone protocols (Anhang Price et al. 2022). Edwards et al. (2023) found no differences in response between sequential push-to-web (web, web / mail) and mail-push (mail, mail / web) strategies.

Considering comparisons between sequential and concurrent designs, Heimel et al. (2024) found no significant differences in response rates between the sequential web-mail design and concurrent web or mail designs (with or without an additional conditional incentive for web response). This was supported by Suzer-Gurtekin et al. (2019) who also found no significant difference in response rates between a concurrent web or mail design compared to a sequential web-mail design. However, both Heimel et al. (2024) and Suzer-Gurtekin et al. (2019) found that the sequential web-mail design resulted in higher percentages of web responses than the concurrent web or mail design. Additionally, the cost per response was lower for the sequential web-mail design than the concurrent web or mail design (Heimel et al. 2024).

On the other hand, Biemer et al. (2018) found that a concurrent web and mail strategy, with an additional conditional incentive for web response, yielded the highest overall response rate compared to a traditional concurrent web and mail (without an additional conditional incentive for web response) or a sequential web-mail strategy. Furthermore, in their study,

Felderer and Herzing (2023) found higher recruitment rates with the concurrent web and PAPI strategy than the sequential PAPI-web or web-PAPI strategies, as well as the web-only strategy. In a cohort study, Bray et al. (2017) also found higher response rates among the group simultaneously offered the web or paper questionnaire from the outset (concurrent design) compared to those only offered the web questionnaire with the initial invitation (sequential design).

Summary: Effects of offered modes of response

Mixed-mode designs yielded higher response rates and more representative samples than single-mode designs, likely due to offering respondents different modes of responding to the survey:

- Results were inconclusive when comparing sequential web-mail and concurrent web or mail designs in terms of response rates but costs per additional respondent were higher in concurrent designs than sequential designs.
- Sequential web-mail designs led to higher percentages of web responses than concurrent designs, thereby reducing costs associated with the more expensive mail phase.
- Among single-mode designs, paper questionnaires were shown to enhance survey response among certain population sub-groups, particularly older respondents and those with lower educational attainment.
- Protocols that included web mode improved sample representativeness across age groups by increasing participation among younger adults.
- As a single mode, web surveys consistently yielded lower response rates than other survey modes, e.g. mail surveys.

2.4.2 Invites and reminders

When using address-based sampling frames, initial contact with sampled members is made through their postal address, and this creates different requirements for self-completion and interviewer-led surveys. In self-completion surveys, the entire invitation process must be carried out through mailed communications that clearly explain the purpose of the survey and provide all necessary instructions or access details, as there is no interviewer available to guide respondents. These surveys therefore rely heavily on the content and design of the communication letters. Prenotification letters are used to inform sampled members that a survey invitation will follow, and reminders are sent to prompt those who may not have responded by the time follow-up mailings are issued. In contrast, interviewer-led surveys use prenotification letters to notify sampled members that an interviewer will soon visit. Interviewers then play a key role in recruiting and motivating participation, administering the questionnaire, clarifying queries, and probing insufficient responses.

2.4.2.1 Prenotifications

While prenotifications or advance letters may have been standard practice in most interviewer-administered surveys, this was largely because they were valued by interviewers (Groves et al. 2009). However, evidence is unclear as to whether they are effective or relevant for self-completion surveys. This may be because, with limited resources, the use of a prenotice may involve considerable cost, both monetary and in terms of a potentially reduced

number of reminders so as not to inundate sampled members with excessive mailings. As a result, some surveys forgo prenotifications in favour of an additional reminder when potential respondents have access to the questionnaire and this may be a more cost-effective way for increasing response rates (Dillman et al. 2014; Nicolaas et al. 2015). Nevertheless, prenotifications may be more effective when the mode of prenotification differs from that of survey administration (Dykema et al. 2013) or when the prenotice originates from a survey sponsor while data collection is conducted by another organisation (Dillman et al. 2014).

Wu, Zhao, and Fils-Aime (2022) conducted a meta-analysis focusing on response rates for online surveys reported in education-related fields. Studies that offered other formats of the same survey along with the online survey were also included. They found that prenotification of potential respondents led to higher response rates (55%), on average, in online surveys compared to no prenotification (40%). Similarly, a Cochrane Review by Edwards et al. (2023) reported that the odds of responding to a postal questionnaire were a third higher (odds ratio (OR) 1.36), while those of responding to an electronic questionnaire were nearly nine tenths higher (OR 1.85) when a prenotice was used than when not. However, Edwards et al. (2023) observed no significant differences in the odds of response when prenotification was delivered by telephone compared to post, or postcard compared to a letter. On the other hand, in their meta-analysis comparing online surveys to one or more other survey modes (mail, telephone, face-to-face), Daikeler et al. (2020) found that prenotifications were less effective in web surveys, resulting in response rates that were 15 percentage points lower compared to other survey modes. However, this meta-analysis also included interviewer-led studies. Additionally, evidence from a systematic review by Anhang Price et al. (2022) found that in a mailed survey, response rates among respondents aged 50 years or older were higher when a prenotification letter was sent two weeks before the questionnaire (59%) compared to when no prenotification letter was sent (41%).

The Office for National Statistics (ONS) (2018) conducted an experiment to investigate how different combinations of letters affected response rates to a short online survey, the Labour Market Survey (LMS), which was based on the Labour Force Survey questionnaire. The experiment tested three conditions:

1. A prenotification letter, an invitation letter, and a first reminder
2. An invitation letter and a first reminder
3. An invitation letter, a first reminder, and a second reminder

The combination of an invitation letter and two reminders resulted in a statistically significantly higher response rate (20%) compared to the invitation letter and first reminder alone (16%). However, the response rate for the combination that included a prenotification letter, invitation letter, and first reminder (18%) did not differ significantly. The results suggested that, while sending a second reminder was more effective than sending only one, the effectiveness of replacing the second reminder with a prenotification letter was inconclusive (ONS 2018), indicating that it is the extra mailing that is more effective rather than the type of mailing.

Overall, evidence suggests that prenotifications remain more effective at increasing response rates than no prenotification in both web and mail surveys, and particularly among older respondents in mail surveys. However, the effectiveness of replacing a reminder with a prenotification letter was inconclusive and evidence suggested that it may be the extra mailing

that is effective rather than the type of mailing. With limited resources, the use of a prenotice in self-completion surveys may not be a cost-effective strategy.

2.4.2.2 Invitation and questionnaire access

In surveys without field interviewers, the mode of contact for recruitment is influenced by the information available from the sampling frame. For address-based sampling frames, for example, in the UK, mail is the most commonly used mode (Olson et al. 2019), although in some circumstances other modes may be available. For example, in longitudinal surveys or studies using a screener survey, additional information, such as email addresses or telephone numbers, may have been collected from a previous wave or a screening questionnaire (Olson et al. 2019). Invitations are crucial in conveying key information encouraging sample members to participate and how to participate, but also in delivering the questionnaire (Dillman et al. 2014), although other methods such as knock-to-nudge or phone-to-nudge, where information is available, can be used.

In their study on mailed push-to-web invitations, Endres et al. (2023) found that the inclusion of a quick response (QR) code, in addition to a uniform resource locator (URL), resulted in modest improvement in response rates compared to invitations with a URL only. Furthermore, the inclusion of the QR code led to more questionnaires being completed online and also on smartphones or tablets (Endres et al. 2023). Marlar and Schreiner (2024) and Maslovskaya et al. (2025) also found improved response rates with the inclusion of a QR code on letters, as well as increased completion of questionnaires on a mobile device. Other studies have also shown that contacting respondents by text message with a survey link led to them being more likely to complete the survey on a smartphone rather than a PC, laptop or tablet (Cabrera-Álvarez and Lynn 2024).

Other studies have also highlighted the potential for improved survey response with accessing questionnaires via QR codes (Harrison et al. 2019) or offering several methods of accessing web surveys with the invitation (Patrick, Couper, et al. 2022; Patrick et al. 2020; Patrick, Pang, et al. 2022). Krause et al. (2024) conducted a follow-up experiment based on an online nationwide survey of staff from U.S. city governments. Sampled individuals who had neither responded to nor opted out of the email survey invitations were randomly assigned to one of three groups: a letter with a paper questionnaire (without a QR code or URL), a postcard with a QR code and short URL to access the questionnaire online, or a personal phone call. The researchers recorded the time and material costs associated with each approach to calculate the respective costs per contact and per response. Krause et al. (2024) found low response rates for survey invitations of postcards with a QR code and URL compared to a letter and CATI. This resulted in cost per completed survey being far greater for the postcard with a QR code and URL despite the material and time cost being lower compared to letter or CATI (Krause et al. 2024).

2.4.2.3 Reminders

a) Frequency of reminders

Follow-up reminders have been shown to be one of the most effective determinants of high survey response (Daikeler et al. 2020; Dillman et al. 2014; Dykema et al. 2013; de Leeuw and Hox 2008). Edwards et al. (2023) found that for participants who had not responded to an initial paper questionnaire, the odds of response were increased by a third when a follow-up reminder was sent than when not. In relation to web surveys, the ONS (2018) conducted an experiment to assess the impact of an additional reminder on response rates for the LMS, as

described above (Section 2.4.1.1). Results showed that the strategy involving two reminders produced a statistically significantly higher response rate (20%) than the single-reminder strategy (16%) (ONS 2018). In a mixed-mode survey that primarily used paper with an option for web completion, Harrison et al. (2019) found that issuing an additional reminder led to a statistically significant increase in response rate compared with sending no extra reminder (33% versus 29%). When considering the impact of the number of contacts by mode, in their meta-analysis, Daikeler et al. (2020) found that contact attempts were less effective in web surveys than in other survey modes, resulting in a difference of around three percentage points in response rates per contact attempt for the web mode.

In their systematic review and meta-analysis, Jia et al. (2021) found that a strategy employing at least two reminders for non-respondent participants achieved the greatest benefit in terms of response rates compared to one reminder. However, there was no significant difference in the response rate between strategies using two reminders and those using three or more reminders (Jia et al. 2021). This was consistent with findings in a national annual cross-sectional survey of US taxpayers by Sun et al. (2020). Sun et al. (2020) conducted an experiment to investigate the effectiveness of an additional third reminder – this though was the seventh contact for sampled members, with the first six contacts being: (1) a prenotification letter; (2) the first survey package (full questionnaire mailing including a cover letter, paper questionnaire, and return envelope); (3) the first postcard reminder; (4) the second survey package; (5) the second postcard reminder; and (6) the third survey package. In their experiment, Sun et al. (2020) sent a letter to two-thirds of the households who had not responded to any of the previous mailings, with a third encouraged to complete the paper survey (reminder for mail), another third encouraged to complete the web survey (reminder for web), and the remaining one-third received no contact (no reminder). Sun et al. (2020) found no statistically significant difference in response rates between the web reminder and the mail reminder conditions. However, when contrasting the no contact condition with the two reminder conditions, the differences in response rate were small (1.5 percentage points) but statistically significant. On the other hand, Edwards et al. (2023) found that combining a telephone reminder (whether telephone numbers were available) with a postal reminder resulted in greater odds of response compared to using a postal reminder alone. Although the literature is inconclusive regarding the optimal number of reminders, evidence suggests that two or three are most effective.

Furthermore, evidence suggested that for postal questionnaires a follow-up reminder strategy with shorter intervals between reminders (higher frequency follow-up interval) resulted in increased odds (over a tenth) of response compared to those with longer intervals (lower frequency follow-up interval) (Edwards et al. 2023). In the studies reviewed by Edwards et al. (2023), the interval between reminders varied, ranging from 1.5 to 3 weeks for high-frequency reminders and 3 to 6 weeks for low-frequency reminders. Additionally, Edwards et al. (2023) also found that in mail surveys, the odds of response were increased nearly by half when a copy of the questionnaire was included with a postal follow-up reminder than when a copy was not included.

In their experiment, the ONS (2018) examined the impact of the timing of invitation and reminder mailings on response rates in the online Labour Market Survey, comparing Wednesday and Friday despatches. Participants were randomly assigned to two groups based on the day on which the invitation letters were despatched, with letters were sent either on a Wednesday or on a Friday. The rationale was that participants receiving an invitation on a

Friday (the Wednesday despatch group) would be more likely to complete the survey, as they would have the weekend available to respond, compared with those receiving the invitation on a Monday (the Friday despatch group). In terms of reminders, the Wednesday group received the first reminder on a Monday (five days after the invitation letter) and the second reminder on a Thursday (three days after the first reminder). By contrast, the Friday group received the first reminder on a Tuesday (four days after the invitation letter) and the second reminder on a Friday (three days after the first reminder). The results showed that participants in the Wednesday group were significantly more likely to access and begin the survey than those in the Friday group. The overall response rate for the Wednesday group was 19%, compared with 17% for the Friday group, and this difference was statistically significant (ONS 2018).

b) Types of reminders

Considering the types of reminders, Edwards et al. (2023) found some evidence that the odds of response to postal questionnaires were increased approximately by half when personalised short message service (SMS) reminders were sent to non-respondents compared with standard SMS reminders. Additionally, SMS reminders were more effective than postcard reminders for electronic questionnaires, with the odds of response also increased approximately by half when SMS reminders were used compared to postcard reminders (Edwards et al. 2023). In their meta-analysis, Wu et al. (2022) found that telephone reminders achieved the highest average response rate for online surveys compared to email, mail or other types of reminders. There was no statistically significant difference in the performance of email and mail reminders (Wu et al. 2022). In their study comparing response rates between a lengthy full survey and a modular survey design in a self-administered web / mail survey, West et al. (2023) found that telephone reminders (where telephone numbers were available) to non-respondents in the later stages of data collection increased cumulative response rates in both experimental conditions. These increases were greater than those observed in earlier stages of data collection following postcard or email / text reminders (West et al. 2023).

Cabrera-Álvarez and Lynn (2024) explored the benefits of incorporating text messages into the contact strategy of a web-first sequential mixed-mode design survey. Conducted in the context of a longitudinal survey, the study had a web phase followed by an interviewer-administered mode (CATI) for non-respondents. Their findings indicated that adding text messages to a strategy that included letters and emails slightly improved response rates during the web-only phase. Notably, the difference diminished and became insignificant after the interviewer-administered fieldwork phase (Cabrera-Álvarez and Lynn 2024). The study also examined whether the timing of text message reminders could reduce fieldwork efforts during the interviewer-administered phase, potentially lowering survey costs. They found no evidence that text message reminders led to significantly faster response times to reduce fieldwork efforts (Cabrera-Álvarez and Lynn 2024).

2.4.2.4 Content of invites and reminders

In surveys without field interviewers, communications play a crucial role in motivating potential respondents to participate. The task of persuading these potential respondents, which was handled by interviewers in interviewer-administered surveys, must now be accomplished through written communications (Dillman 2020), although other approaches such as knock-to-nudge and/or telephone-to-nudge can also be used. While this is a challenge, it provides researchers with the opportunity to make multiple contacts, each of which can serve to legitimise, clarify its purpose, and emphasise the importance of providing a response

(Dillman et al. 2014; Greenberg and Dillman 2023). Evidence from the literature suggests that these contacts should be designed to avoid simple repetition, with each message differing from the previous one. Subsequent contacts can be tailored to appeal to sample members who did not respond to earlier efforts, thereby improving response rates and reducing nonresponse error (Dillman 2020; Dillman et al. 2014; Greenberg and Dillman 2023).

Greenberg and Dillman (2023) conducted an experimental study comparing two approaches to communication to obtain response to paper questionnaires. The first approach was based on social exchange theory used in the *tailored design method* (Dillman et al. 2014) and the other was based on pre-suasion theory (Cialdini 2016). While both approaches highlight the importance of establishing trust, they differ in their appeals to sample members to participate (Greenberg and Dillman 2023). Pre-suasion emphasises establishing a personal sense of trust between the researcher and the potential respondent. It recommends a specific sequence: (i) capturing attention before making the request for a response, (ii) explaining the importance of the request, and (iii) enhancing engagement by introducing an element of mystery to the request (Cialdini 2016; Greenberg and Dillman 2023). In contrast, social exchange does not rely on establishing a personal connection between the researcher and the respondent. Instead, it focuses on fostering trust through the legitimacy of the sponsoring organisation while highlighting the benefits of responding and minimising the costs of participation for the potential respondent (Dillman et al. 2014; Greenberg and Dillman 2023). In their study, Greenberg and Dillman (2023) operationalised the experiment by designing four sequentially delivered requests to respond, including a paper questionnaire based on these approaches. The study found statistically significant differences in response rates between the two approaches. Letters designed using the social exchange approach (25%) outperformed those based on pre-suasion theory (20%) (Greenberg and Dillman 2023).

Evidence has suggested that personalising contacts in different ways can result in higher response levels. In their Cochrane Review, Edwards et al. (2023) found increased odds of response to postal questionnaires when personalised approaches were used. For example, handwritten signatures on cover letters led to greater odds of response compared to typed, scanned or printed signatures. Additionally, handwritten address labels also resulted in greater odds of response than computer-printed labels (Edwards et al. 2023). Furthermore, Edwards et al. (2023) found that for electronic questionnaires, odds of response were increased by about a quarter when a personalised approach was adopted, such as personal salutations in cover letters accompanying questionnaires, or including a picture in an email.

Endres et al. (2023) explored whether response rates varied depending on whether the envelope was addressed to the resident by name (used for all addresses linked to wireless numbers in their study) or addressed generically to ‘STATE Resident’ (used for all addresses linked to landline numbers in their study), in which case the adult with the last birthday at that address was selected. Endres et al. (2023) found a significantly higher response rate (three percentage points higher) among samples addressed generically to ‘STATE Resident’ (Endres et al. 2023). In their study, Dykema et al. (2019) also found slightly higher response rates among respondents who received mail with a generic salutation (‘STATE Resident’) (53%) compared to a personalised salutation (‘SURNAME Household’) (51%), although the differences were not statistically significant. The sample provider had used reverse directory and other methods to match a primary householder’s name to a given address in the sample file, and some fraction was likely to be incorrect, and this may have increased the likelihood of non-response. The results supported the practice of not using personalised names in mail

surveys with an address-based sample (Dykema et al. 2019). Harrison et al. (2019) also found that affixing a handwritten sticky note to a questionnaire led to a statistically significant increase in response compared to not affixing one.

Edwards et al. (2023) also reported significantly higher odds of response to postal questionnaires when certain factors were present in the contacts. These included providing respondents with an assurance of confidentiality, mentioning an obligation to respond than not, and emphasising the salience of the survey in the cover letter of the initial mailing compared to subsequent mailings. Additionally, odds of response were increased by more than a tenth when text in the letter included social pressure compared to a standard letter without social pressure text, and when follow-up letters used veiled threats instead of a casual approach. For electronic questionnaires, Edwards et al. (2023) found that concise or brief letters generated greater odds of response than detailed ones. Furthermore, including a deadline for responses also significantly increased the odds of response compared to letters that did not specify a deadline (Edwards et al. 2023).

Summary: Effects of invites and reminders

Prenotifications were effective in improving survey participation compared to no prenotifications, regardless of the mode of delivery of the prenotice:

- Mailed prenotifications significantly increased response rates among older respondents.
- The effectiveness of using a prenotification letter in place of an additional reminder was inconclusive.
- Evidence suggests that it is the extra mailing that is effective rather than the type of mailing and with limited resources, use of a prenotice in self-completion surveys may not be a cost-effective strategy.

Offering sample members multiple methods of accessing questionnaires could improve response rates:

- QR codes were more cost-effective and offered an operationally simpler method of questionnaire access than URLs.
- QR codes also resulted in an increased number of questionnaires completed online in mixed mode surveys and via mobile devices.

Reminders significantly improved response rates:

- Two or three reminders for non-respondents yielded the greatest benefit.
- Sample members receiving an invitation on a Friday were significantly more likely to access and begin the survey than those receiving the invitation on a Monday.
- For postal questionnaires, shorter intervals of 1.5 – 3 weeks between reminders were associated with higher response rates when compared to longer intervals.
- Telephone reminders, where phone numbers were available, outperformed email, mail, and other types of reminders in boosting response rates.
- SMS reminders achieved higher response rates than postcard reminders for electronic questionnaires.
- Personalised SMS reminders are more effective than standard ones.

2.4.3 Recruitment materials

In surveys without interviewers, such as mail or online surveys, the survey materials become especially important because they must fulfil the motivational and trust-building roles that interviewers provide in interviewer-led surveys. In the absence of an interviewer, respondents rely entirely on the materials to judge the survey's credibility and to decide whether it is worth their time to participate.

2.4.3.1 Survey sponsors

In self-completion surveys, survey sponsor branding serves to establish legitimacy and trust, functions typically fulfilled by an interviewer in interviewer-led surveys, and reduces the likelihood that the materials will be perceived as junk or spam mail. In their Cochrane Review, Edwards et al. (2023) reported that paper survey questionnaires originating from universities were associated with higher odds of response (more than a quarter) compared to those from other sponsors, such as government departments or commercial organisations. However, trust in institutions varies over time and across countries, so findings from international literature may need to be tested locally before implementation. In contrast, they found no evidence that using a coloured letterhead rather than a black-and-white one affected the response odds for postal questionnaires (Edwards et al. 2023). For electronic questionnaires, Edwards et al. (2023) observed that a simple email header featuring only the institution's name resulted in higher odds of response compared to a more complex email header that included the institution's name along with additional details.

2.4.3.2 Postage and mailing days

DeBell et al. (2020) conducted a study to investigate the effect of visible monetary incentives on response rates and compared the effectiveness of first-class versus priority mail postage, which provide faster delivery than standard first-class mail as well as a tracking service. The results indicated that response rates did not significantly differ between the two postage conditions. However, priority mail was considerably more expensive than first-class mail (DeBell et al. 2020). Similarly, Zhang et al. (2023) found that, in terms of cost efficiency, priority mail was less effective than regular first-class mail. On the other hand, Edwards et al. (2023) found that using special delivery, such as recorded, registered, or certified delivery, led to significantly increased odds of response (by more than half) compared to standard delivery. Edwards et al. (2023) also observed that first-class postage yielded greater odds of response than second-class or third-class mailing.

Considering return mailing of paper questionnaires, Edwards et al. (2023) found that stamped return envelopes were associated with increased odds of response of nearly a quarter compared to prepaid business or franked reply envelopes. Additionally, they observed that using multiple stamps on return envelopes increased the odds of response by almost half compared to using a single stamp (Edwards et al. 2023). On the other hand, while Edwards et al. (2023) found that the choice between first-class and second-class stamps on return envelopes had no significant effect on the odds of response, priority stamps were associated with decreased odds of response of more than half compared to first-class stamps.

In terms of mailing days of paper questionnaires, Edwards et al. (2023) found no significant difference in response rates between paper questionnaires mailed on a Monday versus a Friday. The ONS (2018) also investigated the effect of mailing days but compared the despatching of invitation letters on Wednesday and Friday (see details in Section 2.4.2.3). The results showed that participants in the Wednesday group were significantly more likely to

access and begin the survey than those in the Friday group. The overall response rate for the Wednesday group was 19%, compared with 17% for the Friday group, and this difference was statistically significant. This difference may likely be due to recipients being available to complete the survey over the weekend.

2.4.3.3 Envelopes

In surveys conducted without field interviewers, particularly those relying on address-based sample frames, the design and presentation of the envelope or mailer are critical in influencing whether it will be opened. Factors that may be associated with the likelihood of the envelope being opened include the type of envelope, size, and colour among design elements (Lavrakas et al. 2018).

In terms of envelope size, in their experimental study on the effects of QR codes and envelope size in push-to-web surveys, Endres et al. (2023) found no significant difference in overall response rates between larger non-standard size (6 × 9) and standard size (4.125 × 9.5) envelopes.

The ONS (2018) examined the effect of envelope colour on response rates using the online Labour Market Survey. Half of the sample received letters in brown envelopes, while the other half received white envelopes. Brown envelopes appeared to be slightly more effective in encouraging recipients to access and begin the survey; however, the difference in overall response rate compared to white envelopes was not statistically significant. This is consistent with evidence by Edwards et al. (2023) who found no evidence of an effect on response of using brown compared to white envelopes. The ONS (2018) also tested the impact of branded envelopes – featuring regionalised material – on response rates, although this experiment was limited to Scotland and Wales. In England, all envelopes had a uniform design, displaying the Royal Coat of Arms with the phrase 'On Her Majesty's Service' printed along the top edge, a slogan at the bottom right stating, 'Play your part in shaping the future of the UK', and an ONS return address on the back. For addresses in Wales, envelopes included Welsh translations of 'On Her Majesty's Service', the slogan, and the return address. However, half of the envelopes sent to addresses in Wales and Scotland were modified to feature a region-specific slogan and a distinctive logo – a dragon in Wales and a map of Scotland in Scotland. These were considered the 'branded' envelopes. The alternate slogan in Wales was 'Wales, make sure you are counted' (in both English and Welsh), while in Scotland it was 'Scotland, make sure you are counted'. Envelopes without these regional adaptations were considered 'unbranded'. Branded envelopes appeared to have a positive effect on response rates in Wales, whereas unbranded envelopes showed a slight advantage in Scotland. However, in both cases, the differences were not statistically significant.

Bilgen et al. (2023) conducted randomised experiments to examine the effects of envelope window size and location on the display of monetary incentives. Their findings showed that mailing envelopes with a front window showcasing the cash incentive significantly increased recruitment odds compared to windowless envelopes. However, no significant difference in recruitment odds was observed based on the window's location (front versus back) or its size on the envelope (Bilgen et al. 2023). Overall, the condition with a front window and the highest unconditional incentive ($5) achieved the highest recruitment rate, whereas the condition without a window and the lowest unconditional incentive ($2) resulted in the lowest recruitment rate. Additionally, among the front-window conditions, envelopes with a small window and a $5 unconditional incentive outperformed those with a larger window and the

same incentive, as well as envelopes with small or large windows offering $2 unconditional incentives (Bilgen et al. 2023).

Considering variations in display, Bilgen et al. (2023) found that envelopes displaying the face or image of the cash through the window had reduced recruitment odds compared to those displaying the tender's numeric amount. On the other hand, Edwards et al. (2023) found no evidence that including a message about an incentive on the envelope affected the odds of response compared to not including a message, nor did the inclusion of a 'teaser' – typically a short question printed on the outer envelope, designed to entice the recipient to examine its contents – show any effect compared to having 'no teaser'.

Summary: Effects of recruitment materials

Sponsors:

- Survey questionnaires originating from universities were associated with higher odds of response compared to those from other sponsors, such as government departments or commercial organisations.

Postage

- First-class mail yielded significantly higher response rates than second-class and while the first-class mail response rates were comparable to priority mail, first-class mail was more cost-effective.
- Mail sent via special delivery, such as recorded, registered, or certified delivery, achieved higher response rates that standard delivery.
- A cost-effective strategy might involve using first-class mail in the early phases of fieldwork, reserving special delivery for nonrespondents later.
- For return mailing, stamped return envelopes were associated with higher response rates than prepaid business or franked reply envelopes. Additionally, multiple stamps were more effective than a single stamp.

Envelopes:

- Mailing envelopes with a window, regardless of its location or size, showcasing the cash incentive led to significantly increased recruitment rates than windowless envelopes. This may have been the effect of the visible incentive.
- Among the front-window conditions displaying the visible incentive, envelopes with a small window outperformed those with a larger window and the same incentive.

2.4.4 Incentive strategies

Incentives are a token of appreciation and serve to maximise respondents' sense of reward and trust, thereby encouraging them to reciprocate by completing the survey (Dillman et al. 2014). They are particularly important in surveys without field interviewers, as they substitute for the social pressure and personal engagement that an interviewer would normally provide in interviewer-led surveys.

2.4.4.1 Presence of incentives

Some survey sponsors may be reluctant to offer incentives to potential respondents due to associated costs, ethical concerns, and the possible impact on intrinsic motivation for participation (Anhang Price et al. 2022; Singer 2008). This may be particularly the case if large

monetary incentives are offered (Singer 2008), which could be perceived as coercive and exerting undue influence on respondents (Anhang Price et al. 2022; Singer 2008). Nonetheless, experimental evidence shows that offering incentives reduces nonresponse to survey requests (Dillman et al. 2014; Groves et al. 2009; Lynn 2008; Singer and Ye 2013).

According to Edwards et al. (2023), the odds of response to postal or electronic questionnaires increased when incentives were included than when not. This was regardless of the type of incentive. Evidence from a systematic review and meta-analysis by Abdelazeem et al. (2023) suggested that using incentives increased response rates and may reduce the likelihood of nonresponse. This was supported by Brick and Tourangeau (2017) who found that responsive survey designs that added incentives were likely to raise overall response rates and reduce average nonresponse bias somewhat. In their systematic review and meta-analysis, Jia et al. (2021) also found that monetary incentives (cash or cheque and conditional or unconditional) significantly improved first (after initial contact) and final (after several reminders) response rates compared to no incentive. Other studies found that offering incentives resulted in significantly higher probability of response (Glas et al. 2019; Hsu et al. 2017; ONS 2018; Sammut, Griscti, and Norman 2021; Suzer-Gurtekin et al. 2019) or consistently improved response rates (McKernan et al. 2022; Noel and Huang 2019; Safarpour, Bush, and Hadden 2022; Sun et al. 2020) compared to not offering incentives. Furthermore, in the context of a longitudinal study, Booth et al. (2024) found that offering an incentive boosted the response rate from a baseline measure in a cohort study compared to not offering an incentive.

While the presence of incentives may increase response rates and reduce nonresponse error, they may also introduce response bias by, for instance, appealing more to respondents with lower socioeconomic status, which is positive as this group tends to be under-represented, or result in over-representation of some population groups (Abdelazeem et al. 2023). One other study suggested that offering incentives did not significantly influence response rates. In their meta-analysis examining response rates of online surveys, Wu et al. (2022) found that the use of incentives was not significantly associated with response rates. Notably, in the studies included in this meta-analysis, if there was insufficient information to code the use of incentives, they were classified as having ‘no information’. However, for the purposes of estimating response rates, these studies were grouped with those that had ‘no’ incentives. Importantly, a lack of information did not necessarily indicate that no incentives were provided, which may have influenced the results (Wu et al. 2022).

2.4.4.2 Timing of incentives

Considering the timing of incentives, unconditional (or prepaid) incentives have been shown to be more effective at improving survey response than conditional (or promised) incentives (Dillman et al. 2014; Dykema et al. 2013; Groves et al. 2009; Singer and Ye 2013). Results from a systematic review and meta-analysis by Abdelazeem et al. (2023), a systematic review by Anhang Price et al. (2022), and a meta-analysis by Mercer et al. (2015) found that unconditional incentives were more effective at increasing response rates compared to conditional incentives. Edwards et al. (2023) also found that the odds of response to postal questionnaires were increased by more than a half when unconditional incentives were offered compared to conditional incentives. Furthermore, incentives provided with the initial mailing resulted in higher response rates than those offered in subsequent mailing (Anhang Price et al. 2022; Edwards et al. 2023). In their meta-analysis, Kocar and Kaczmirek (2023) also found a positive impact on overall recruitment rates when unconditional incentives were offered compared to conditional incentives.

The effectiveness of unconditional incentives in eliciting survey response relative to conditional incentives was also supported by other experimental studies. Smith et al. (2019) found unconditional cash incentives to be more effective compared to conditional gift cards, even if the monetary value of the unconditional incentive was lower. A review by Sammut et al. (2021) found that unconditional vouchers resulted in a significantly higher response rate to web surveys than conditional vouchers. However, other studies found no evidence of the effect of the timing of incentives on survey response. Edwards et al. (2023) found no effect of the timing of incentives on response to electronic questionnaires. In their study investigating web completion for panel members in a mixed-mode experiment, Bretschi et al. (2023) found that offering unconditional incentives did not result in higher cumulative web completion rates compared to offering conditional incentives. On the other hand, Brenner and Buskirk (2022) found that conditional gift code (e-voucher) incentives outperformed unconditional gift code incentives in terms of response rates. This was attributed to the overly complex procedures required to claim the unconditional incentive, which involved many steps and asked for too much information. Recipients were instructed to visit a portal via a URL printed on the postcard or letter, enter their email address, and then click on a link sent to their email, which redirected them to the vendor's site. In contrast, for the conditional incentive, recipients received a link to claim a gift code upon completing the survey (Brenner and Buskirk 2022).

Other studies examined mixed incentives which combined conditional and unconditional incentives. Evidence suggested that an incentive strategy combining unconditional and conditional incentives resulted in increased response to electronic questionnaires than providing unconditional incentives alone (Edwards et al. 2023; Sammut et al. 2021). This is supported by evidence from the ONS (2018b), who used the LMS, to examine the impact of different incentive strategies on response rates. Sampled addresses were randomly allocated to one of four groups: no incentive, an unconditional £5 gift voucher combined with a conditional £10 voucher upon survey completion, an unconditional £5 voucher only, or an unconditional tote bag. The results showed that the mixed incentive strategy, providing an unconditional £5 voucher and a £10 conditional upon completion, generated the highest response rate at 27%, which was significantly greater than the unconditional £5 voucher (25%) and the unconditional tote bag incentive (24%). Abdelazeem et al. (2023) also found combined unconditional and conditional incentives to be more effective at increasing retention rates in follow-up surveys compared to conditional incentives. Furthermore, Bianchi and Biffignandi (2019) and Biemer et al. (2018) found that a conditional incentive to enhance web response, additional to an unconditional incentive, improved responses by web. Generally, while unconditional incentives may be more effective at eliciting survey response compared to conditional incentives, evidence suggested that conditional incentives may be more cost-effective in terms of the cost of achieving an additional percentage point increase in the response rate (Abdelazeem et al. 2023; Brenner and Buskirk 2022).

2.4.4.3 Types of incentives

Evidence has consistently shown monetary incentives to be the most effective type of incentive at improving survey response (Dillman et al. 2014; Dykema et al. 2013; Groves et al. 2009; Olson et al. 2021; Singer and Ye 2013). According to Anhang Price et al. (2022) cash incentives were generally preferred to other types of incentives and Abdelazeem et al. (2023) found these to be more effective than vouchers or lotteries at improving response rates. Edwards et al. (2023) also found greater odds of response when cash incentives were used

rather than non-monetary incentives, such as lottery prize draws, USB flash drive, phone cards, passes to regional parks. This was supported by other studies which found cash incentives to be more effective compared to gift cards or other non-monetary incentives (McKernan et al. 2022; Sammut et al. 2021; Smith et al. 2019). This was the case even if the value of the cash incentive was lower (Smith et al. 2019). Similarly, Brenner and Buskirk (2022) also found unconditional cash incentives, even of smaller value, resulted in higher response rates compared to unconditional or conditional gift code (digital code for redeeming the gift card and can be recouped if they remain unused) incentives.

In the literature, there were other variations of presenting incentives to respondents, and a number of studies investigated the impact on response rates of cash incentives visible through the envelope window (Bilgen et al. 2023; DeBell 2023; DeBell et al. 2020; Zhang et al. 2023). According to DeBell et al. (2020), visible cash incentives resulted in a significantly higher response rate to a mail survey compared to a non-visible cash incentive. Furthermore, DeBell (2023) also found that compared to a non-visible cash incentive, a visible cash incentive significantly increased response to a screening questionnaire and a main interview for a fresh sample, as well as in a sample of previous nonrespondents. These findings were supported by Zhang et al. (2023) who found increased response rates with visible incentives over non-visible incentives. Visible incentives were also more effective in recruiting respondents from some ethnic minority groups, younger people, and those with moderate response propensities to participate, while the effect was smaller among addresses with higher probabilities of being undeliverable (Zhang et al. 2023).

Other studies also compared different types of non-monetary incentives. Response rates were significantly higher when a small, guaranteed gift card was used compared to high-payout prize draw, while there was no difference between high-payout and low-payout prize draws (Dykema et al. 2024). On the other hand, Edwards et al. (2023) found that, for postal questionnaires, the odds of response were greater when a cheque was used compared to a cashcard, while other non-monetary incentives resulted in greater odds of response than a donation to charity.

2.4.4.4 Amount of incentives

In terms of the amount or value of incentives, there is no clear evidence on how large the incentives should be (Singer and Ye 2013). Abdelazeem et al. (2023) found no clear correlation between the value of incentives and response rates, while Noel and Huang (2019) found that the relationship between incentive amount and response rates was not a monotonically increasing relationship. However, larger incentives tend to be more effective than smaller ones (Dillman et al. 2014; Dykema et al. 2013; Groves et al. 2009; Singer and Ye 2013), although evidence suggests that returns diminish (Groves et al. 2009; Singer and Ye 2013). In their systematic review and meta-analysis of randomised controlled trials on the association between monetary incentives and response rates, Jia et al. (2021) found an optimal amount of between US$5 and US$15, but the increase in response rates was at a declining rate.

In the UK, incentive amounts of £5 or £10 were typically offered (Booth et al. 2024). In their study, Booth et al. (2024) found conditional £10 vouchers yielded higher response rates, although this was compared to a control group offered no incentive. They suggested incentives of greater value may have resulted in a higher response rate (Booth et al. 2024). In the case of ongoing longitudinal panels, Bianchi and Biffignandi (2019) found that higher unconditional incentives of £30 were more effective compared to £5 and £10 incentives for

individual level-response, while it was more effective compared to the £5, £10, and £20 incentives for household level-response. However, larger incentives may not always be cost-effective or feasible (Booth et al. 2024).

Edwards et al. (2023) found that odds of response to a postal questionnaire were a quarter higher when larger cash incentives were offered compared to smaller cash incentives, while larger non-monetary incentives were likely to increase the odds of response compared with smaller non-monetary ones, although this effect was borderline statistically significant (OR 1.15 [95% CI: 1.00, 1.33]). This was supported by Bilgen et al. (2023) who found that an unconditional US$5 monetary incentive sent with recruitment mailing was more effective than an unconditional US$2 monetary incentive. However, it was more costly obtaining a recruit with the larger incentive than the smaller one (Bilgen et al. 2023). For electronic questionnaires, there was no evidence of an effect of the size of non-monetary incentives on response (Edwards et al. 2023).

Brick and Tourangeau (2017) examined responsive survey designs that incorporate higher incentives to reduce nonresponse bias. They found that incentives primarily increased response among individuals with low response propensities, with little effect on those already likely to respond. As a result, incentives raised overall response rates but did not substantially reduce variation in response propensities. Consequently, responsive designs that add incentives are likely to improve overall response rates and may slightly reduce average nonresponse bias. However, it was unclear what level of incentives would substantially increase response rates and reduce average nonresponse bias (Brick and Tourangeau, 2017).

Summary: Effects of incentives

Offering an incentive significantly increased the likelihood of response and could reduce nonresponse error compared to not offering an incentive, regardless of the type of incentive:

- Incentives enhanced sample representativeness by attracting respondents with a low response propensity.
- Responsive designs that add incentives are likely to improve overall response rates among individuals with low response propensities and may slightly reduce average nonresponse bias.
- Distribution of incentives that front-load a small portion of the incentive may boost initial participation, while reserving a larger amount for completion could encourage follow-through.

Timing of incentives:

- Unconditional incentives were more effective at improving recruitment and response rates than conditional incentives.
- Conditional incentives were more cost-effective than unconditional incentives in terms of the cost of achieving an additional percentage point increase in the response rate.
- Strategies that combined both conditional and unconditional incentives were shown to be more effective at encouraging response than either conditional incentives or unconditional incentives alone.

Type of incentives:

- Monetary incentives were more effective at increasing the likelihood of response compared to non-monetary incentives even if the value of the monetary incentive was lower.
- Cash incentives were more effective than vouchers or gift cards and other non-monetary incentives, such as lottery prize draws, at improving response rates
- Among non-monetary incentives, small but guaranteed gift cards yielded higher response rates than high-payout prize draws.

Value of incentives:

- There was no clear correlation between the value of incentives and response rates, but larger incentives tended to be more effective than smaller ones although there was evidence of diminishing returns.
- Larger incentives may not always be cost-effective or feasible.
- In the UK context, incentive amounts of £5 or £10 were typically offered.

2.4.5 Questionnaire design

Questionnaire design is especially important in self-completion surveys because respondents must depend entirely on the written instructions and questionnaire layout, with no interviewer available to offer guidance. Any unclear wording or confusing structure can result in misunderstandings, missing answers, or increased dropout. In interviewer-led surveys, interviewers provide clarification, encouragement, and routing support in real time, but in self-completion surveys the questionnaire itself must perform all of these functions.

2.4.5.1 Questionnaire presentation

In their systematic review, which included an analysis of questionnaire formatting and layout, Anhang Price et al. (2022) found no significant difference in response rates between a small questionnaire booklet on white paper and a large booklet on blue paper. However, both formats yielded significantly higher response rates than the small booklet on blue paper. Furthermore, the response rate for the large booklet on blue paper was significantly higher than that for the large booklet on white paper. In contrast, results from the Cochrane Review by Edwards et al. (2023) found no evidence of a difference in response odds based on the use of coloured paper versus white paper, or colour ink versus black or blue ink. Additionally, there was no evidence of a difference in the odds of response when booklet formats were used instead of stapled pages, as well as using high-quality or thicker paper did not improve response odds compared to standard-quality or thinner paper (Edwards et al. 2023).

Considering electronic questionnaires, Edwards et al. (2023) found that the odds of response were increased by nearly a fifth when response categories were presented in textual format compared to a visual presentation, such as pictures to enhance the attractiveness of the questionnaire.

2.4.5.2 Questionnaire length and complexity

In their Cochrane Review, Edwards et al. (2023) found that for both paper and electronic questionnaires, the odds of response were increased by half or more when shorter questionnaires were used compared to longer questionnaires. This was consistent with findings from a systematic review by Anhang Price et al. (2022). Anhang Price et al. (2022)

found that, for surveys with a similar level of complexity and appeal to sample members, shorter questionnaires were associated with higher response rates compared to longer questionnaires. However, reducing the number of questions inevitably leads to a loss of information. Instead, reducing questionnaire complexity can enhance survey response rates while minimising respondent burden (Anhang Price et al. 2022).

Hanson et al. (2025) also reported findings from an experiment in Austria that examined the effects of questionnaire length in a push-to-web self-completion survey using the Round 10 questionnaire of the European Social Survey. The experiment compared a full questionnaire estimated to take about 50 minutes to complete with a shorter version expected to take 35 minutes, with addresses randomly assigned to one of the two versions. The shorter questionnaire produced a statistically significantly higher response rate than the longer questionnaire (38% compared with 34%). However, Hanson et al. (2025) found no significant differences in sample composition (sex, age, education, employment status, citizenship, household size, and country of birth) or in data quality indicators between the two versions. This suggested that, while the shorter questionnaire resulted in a higher response rate, it did not yield clear advantages in terms of sample composition or data quality.

West et al. (2023) conducted a randomised experiment to test the effectiveness of a modular survey design on completion rates in self-administered surveys. A modular survey design involves splitting a lengthy survey into multiple modules that respondents can complete at their convenience (West et al. 2023). The study assessed whether this approach improved completion rates for a lengthy web / mail survey compared to asking respondents to complete the entire survey in a single sitting, with breaks taken as needed. The findings revealed that the modular survey design significantly reduced overall survey completion rates, and this was primarily due to lower response rates for the follow-up modules (West et al. 2023).

Summary: Effects of questionnaire design

Shorter questionnaires were associated with increased likelihood of response compared to longer questionnaires:

- While shorter questionnaires resulted in higher response rates, they did not yield clear advantages in terms of sample composition or data quality.
- However, reducing questionnaire length inevitably resulted in a loss of information. Simplifying questionnaire complexity may be a more viable strategy to minimise respondent burden.
- A strategy of splitting a lengthy questionnaire into multiple modules proved ineffective, as it significantly reduced overall survey completion rates, primarily due to lower response rates for the follow-up modules.

2.5 Survey quality indicators and survey costs

Survey quality indicators are important in all surveys, but they are particularly critical in self-completion surveys because the built-in quality controls normally provided by interviewers are absent. Self-completion surveys are completed in settings that cannot be controlled, which increases the likelihood of distraction and break-offs. Moreover, without an interviewer, it is more difficult to verify respondent identity and adherence to instructions, making external quality indicators essential for assessing data quality.

2.5.1 Representativeness

Cornesse and Bošnjak (2018) conducted a meta-analysis investigating the association between survey characteristics and representativeness. They found evidence that probability-based sampling resulted in recruited samples being more representative than non-probability-based sampling. Cornesse et al. (2020) also reviewed literature on ongoing debates, including empirical studies that assessed the accuracy of probability and non-probability sample surveys by comparing survey estimates with external population benchmarks. They found that probability sample surveys were generally more accurate than non-probability sample surveys. Additionally, their findings suggested that mixed-mode designs resulted in better representativeness compared to single-mode designs, while the web mode yielded less representative samples than other single-mode designs (Cornesse and Bošnjak 2018). A systematic review by Anhang Price et al. (2022) found that sequential mixed-mode protocols that included the web mode improved sample representativeness across age groups by increasing participation among younger adults. On the other hand, the inclusion of the web mode did not improve representativeness among other low-propensity respondents, such as those on low incomes or from ethnic minority groups (Anhang Price et al. 2022). Biemer et al. (2018) also found that respondents with no internet access had a low propensity to respond online and were underrepresented in web-only protocols.

Other studies have suggested that incentives can improve sample representativeness. In a randomised experiment, Suzer-Gurtekin et al. (2019) found that incentives had the effect of reducing the extent of over-representation among more educated and respondents from a white ethnic background. However, Sun et al. (2020) found that incentives had no effect of improving participation among low response propensity groups, such as young adults or those who lived in urban areas.

Previous research suggested that incentives had a greater effect increasing responses among non-respondent cohort members from a prior wave compared to those who had responded in the prior wave, thereby reducing nonresponse bias (Zagorsky and Rhoton 2008). However, in their cohort study, Booth et al. (2024) found that while monetary incentives increased responses among prior wave non-respondents, the effect was smaller than the increase observed among prior wave respondents. Booth et al. (2024) suggested that a targeted incentive of greater value (exceeding £10) for prior wave non-respondents might have resulted in increased responses and reduced nonresponse bias. This was partly supported by Brick and Tourangeau (2017), who examined the impact of responsive survey designs on reducing nonresponse bias. They found that responsive designs incorporating incentives were likely to increase overall response rates and could reduce nonresponse bias somewhat. However, it was unclear what level of incentives would substantially increase response rates to lower average nonresponse bias (Brick and Tourangeau 2017).

In addition to responsive designs that incorporated incentives, Brick and Tourangeau (2017) also considered the impact of switching modes on reducing nonresponse bias. Previous research had shown that using mail invitations to complete a web survey, then switching to a mail questionnaire increased overall response rates but also response rates for the web approach and reduced biases in estimates from web-only data (Messer and Dillman 2011). Brick and Tourangeau (2017) found that the responsive design that switched modes substantially increased response rates and could lower average nonresponse bias by providing a different response stimulus for some groups. Other studies also suggested that mixed-mode

designs increased response rates and may reduce nonresponse bias (McGonagle and Sastry 2023; Sakshaug, Cernat, and Raghunathan 2019; Smith et al. 2019; Sommers et al. 2019).

2.5.2 Break-off rates

In their cohort study evaluating the effect of monetary incentives on web survey responses, Booth et al. (2024) found lower break-off rates among the incentive group compared to the group that was offered no incentive. On the other hand, Dykema et al. (2024) investigated the impact of the type of incentive on data quality in a web survey and found significantly higher break-off rates among respondents entered into high-payout or low-payout prize draws than among those offered a guaranteed incentive. Additionally, in their study examining the effects of prompt interventions in a web survey on speeding and straightlining, Sun et al. (2023) found that interventions designed to reduce undesirable behaviours had no impact on break-off rates between prompted and unprompted treatment groups.

2.5.3 Survey costs

Decisions on survey features, such as mode design, incentive strategy, including recruitment materials, have implications for survey costs. Evidence from literature suggests that mixed-mode designs have the potential to reduce total survey costs (Dillman 2017; Dillman et al. 2014; de Leeuw 2018; Olson et al. 2019). Mixed-mode designs that mix web and paper achieve lower costs by initially administering the questionnaire using less expensive modes and then using more expensive modes for nonrespondents (Dillman 2017; Dillman et al. 2014; de Leeuw 2018).

While experimental evidence indicated that the web-only mode was the least expensive compared to concurrent web and mail or sequential web-mail strategies, the web-only mode achieved the lowest response rate (Biemer et al. 2018). On the other hand, Biemer et al. (2018) found that average total costs for the sequential web-mail strategy were lower than those of the concurrent web and mail strategies (with or without an additional conditional incentive for web response). However, the concurrent web and mail strategies achieved higher response rates, particularly the strategy with an additional conditional incentive for web response (Biemer et al. 2018). These findings were supported by Bray et al. (2017) who found higher costs to have an extra respondent complete a questionnaire in the concurrent web and paper design compared to the sequential web-paper design. Similarly to the study by Biemer et al. (2018), Bray et al. (2017) also found a higher response rate for the concurrent design than the sequential design (Bray et al. 2017). Lynn (2020) evaluated push-to-web methodology for mixed-mode surveys using address-based samples and found modest overall costs savings for the web-first protocol compared to a CAPI-first protocol, although the web-first protocol was less successful at achieving full household participation.

Considering incentive strategies, evidence indicated that unconditional incentives were generally more effective at eliciting survey response than conditional incentives, however, conditional incentives were more cost-effective (Abdelazeem et al. 2023; Brenner and Buskirk 2022). In their study investigating the effects of sequential unconditional incentives in a mail survey, Dykema et al. (2021) found that total costs were lowest for the group that received $5 in the first mailing, followed by $5 in the second mailing ($5/$5) compared with groups that received $10 in the first mailing and no incentive in the second mailing ($10/$0), $10 in the first and $5 in the second ($10/$5), $5 in the first and $10 in the second ($5/$10), or $10 in both the first and second mailings ($10/$10), all of which involved unconditional incentives.

On the other hand, when costs per completed survey were considered, costs were comparable between the $5/$5 and $5/$10 groups, although they were slightly lower for the $5/$10 group. Furthermore, the response rate was significantly higher for the $5/$10 group than the $5/$5 group (Dykema et al. 2021). In terms of distributing flat incentives, Dykema et al. (2021) found that distributing a $10 incentive as $5/$5 resulted in lower overall costs and costs per completed survey than $10/$0. Similarly, a $15 incentive distributed as $5/$10 also achieved lower overall costs and costs per completed survey compared to a $10/$5 distribution. Front-loading a small portion of the incentive appeared to boost initial participation, while reserving a larger amount for completion appeared to encourage follow-through. Importantly, these cost savings were achieved without compromising response rates (Dykema et al. 2021).

Dykema et al. (2024) also examined costs for a web survey that used guaranteed incentives and prize draws. Treatment groups were offered a guaranteed $5 gift card, entry into a low-payout drawing for one of twenty $100 prizes, or entry into a high-payout drawing for one of four $500 prizes. The total cost of incentives and cost per completed survey were higher for the guaranteed incentive group than the prize drawing groups, however, the guaranteed incentive resulted in significantly higher response rates (Dykema et al. 2024).

Recruitment materials used in a survey study also contribute to survey costs. Bilgen et al. (2023) found that mailing envelopes with windows significantly increased recruitment odds compared to windowless envelopes and did so at a lower cost. Additionally, they observed that the condition displaying a visible tender amount for a $5 unconditional incentive was less costly to administer than the condition displaying a $2 tender amount, while also resulting in higher recruitment odds (Bilgen et al. 2023).

Summary: Effects on survey quality and survey costs

Representativeness

- Probability-based sampling resulted in recruited samples being more representative than non-probability-based sampling.

Break-off rates

- Incentives had the effect of reducing break-off rates in web surveys compared to offering no incentive, while payout prize draws resulted in higher break-off rates than guaranteed incentives.
- Prompt interventions designed to reduce undesirable behaviours such as speeding and straightlining had no impact on break-off rates between prompted and unprompted treatment groups.

Survey costs

- The web-only mode was the least expensive compared to concurrent web and mail or sequential web-mail strategies, although the web-only mode achieved the lowest response rate.
- Average total costs were lower for the sequential web-mail strategy than those of the concurrent web and mail strategies.
- Unconditional incentives were generally more effective at eliciting survey response than conditional incentives, however, conditional incentives were more cost-effective.

2.6 Summary of findings

The main findings from the literature can be summarised as follows:

1. Probability-based sampling resulted in recruited samples being more representative than non-probability-based sampling.

2. Prenotifications were effective in improving survey participation compared to no prenotification, regardless of the mode of delivery of the prenotice:
   - Mailed prenotifications significantly increased response rates among older respondents.
   - The effectiveness of using a prenotification letter in place of an additional reminder was inconclusive.
   - Evidence suggests that it is the extra mailing that is effective rather than the type of mailing and with limited resources, use of a prenotice in self-completion surveys may not be a cost-effective strategy.

3. Offering sample members multiple methods of accessing questionnaires could improve response rates:
   - QR codes were more cost-effective and offered an operationally simpler method of questionnaire access than URLs.
   - QR codes also resulted in an increased number of questionnaires completed online in mixed mode surveys and via mobile devices.

4. Reminders significantly improved response rates:
   - Two or three reminders for non-respondents yielded the greatest benefit.
   - Sample members receiving an invitation on a Friday were significantly more likely to access and begin the survey than those receiving the invitation on a Monday.
   - For postal questionnaires, shorter intervals of 1.5 – 3 weeks between reminders were associated with higher response rates.
   - Telephone reminders, where phone numbers were available, outperformed email, mail, and other types of reminders in boosting response rates
   - SMS reminders achieved higher response rates than postcard reminders for electronic questionnaires
   - Personalised SMS reminders are more effective than standard ones.

5. Considering the mode of response, mixed-mode designs yielded higher response rates and more representative samples than single-mode designs, likely due to offering respondents different modes of responding to the survey:
   - Results were inconclusive when comparing sequential web-mail and concurrent web or mail designs in terms of response rates but costs per additional respondent were higher in concurrent designs than sequential designs.
   - Sequential web-mail designs led to higher percentages of web responses than concurrent designs, thereby reducing costs associated with the more expensive mail phase.
   - Among single-mode designs, paper questionnaires were shown to enhance survey response among certain population subgroups, particularly older respondents and those with lower educational attainment.

- Protocols that included web mode improved sample representativeness across age groups by increasing participation among younger adults.
- As a single mode, web surveys consistently yielded lower response rates than other survey modes, e.g. mail surveys.

6. Sponsors:
   - Survey questionnaires originating from universities were associated with higher odds of response compared to those from other sponsors, such as government departments or commercial organisations.

7. Postage
   - First-class mail yielded significantly higher response rates than second-class mailing and while the first-class mail response rates were comparable to priority mail, first-class mail was more cost-effective.
   - Mail sent via special delivery, such as recorded, registered, or certified delivery, achieved higher response rates that standard delivery.
   - A cost-effective strategy might involve using first-class mail in the early phases of fieldwork, reserving special delivery for nonrespondents later.
   - For return mailing, stamped return envelopes were associated with higher response rates than prepaid business or franked reply envelopes, while multiple stamps were more effective than a single stamp.

8. Envelopes:
   - Mailing envelopes with a window, regardless of its location or size, showcasing the cash incentive led to significantly increased recruitment rates than windowless envelopes. This may have been the effect of the visible incentive.
   - Among the front-window conditions displaying the visible incentive, envelopes with a small window outperformed those with a larger window and the same incentive.

9. Offering an incentive significantly increased the likelihood of response and could reduce nonresponse error compared to not offering an incentive, regardless of the type of incentive:
   - Incentives enhanced sample representativeness by attracting respondents with a low response propensity.
   - Responsive designs that add incentives are likely to improve overall response rates among individuals with low response propensities and may slightly reduce average nonresponse bias..
   - Distribution of incentives that front-load a small portion of the incentive may boost initial participation, while reserving a larger amount for completion could encourage follow-through.

10. Timing of incentives:
    - Unconditional incentives were more effective at improving recruitment and response rates than conditional incentives.

- Conditional incentives were more cost-effective than unconditional incentives in terms of the cost of achieving an additional percentage point increase in the response rate.
- Strategies that combined both conditional and unconditional incentives were shown to be more effective at encouraging response than either conditional incentives or unconditional incentives alone.

11. Type of incentives:
    - Monetary incentives were more effective at increasing the likelihood of response compared to non-monetary incentives even if the value of the monetary incentive was lower.
    - Cash incentives were more effective than vouchers or gift cards and other non-monetary incentives lotteries at improving response rates
    - Among non-monetary incentives, small but guaranteed gift cards yielded higher response rates than high-payout prize draws.

12. Amount of incentives:
    - There was no clear correlation between the amount of incentives and response rates, but larger incentives tended to be more effective than smaller ones although there was evidence of diminishing returns.
    - Larger incentives may not always be cost-effective or feasible.
    - In the UK context, incentive amounts of £5 or £10 were typically offered.

13. Considering the length and complexity of questionnaires, shorter questionnaires were associated with increased likelihood of response compared to longer questionnaires:
    - While shorter questionnaires may result in higher response rates, they did not yield clear advantages in terms of sample composition or data quality.
    - However, reducing questionnaire length inevitably results in a loss of information. Simplifying questionnaire complexity may be a more viable strategy to minimise respondent burden.
    - A strategy of splitting a lengthy questionnaire into multiple modules proved ineffective, as it significantly reduced overall survey completion rates, primarily due to lower response rates for the follow-up modules.

14. Break-off rates
    - Incentives had the effect of reducing break-off rates in web surveys compared to offering no incentive, while payout prize draws resulted in higher break-off rates than guaranteed incentives.
    - Prompt interventions designed to reduce undesirable behaviours such as speeding and straightlining had no impact on break-off rates between prompted and unprompted treatment groups.

15. Survey costs
    - The web-only mode was the least expensive compared to concurrent web and mail or sequential web-mail strategies, although the web-only mode achieved the least response rate.

- Average total costs were lower for the sequential web-mail strategy than those of the concurrent web and mail strategies.
- Unconditional incentives were generally more effective at eliciting survey response than conditional incentives, however, conditional incentives were more cost-effective.

3 UK survey practice

3.1 Introduction

This chapter summarises the evidence on relevant dimensions of survey practice from UK surveys without field interviewers, including the main relevant aspects of survey design, contact and recruitment strategies, communication materials, incentivisation strategies, and reporting of survey outcomes. It aims to provide a descriptive overview of self-completion surveys in the UK. Some surveys have conducted experiments testing different aspects of the survey recruitment process. As these experiments are helpful for our general analysis of good practices for effective survey design, they are also reported in the appropriate sections.

3.2 Review scope and objectives

3.2.1 Inclusion criteria

In February 2024, Research Strand 4 of Survey Futures approached several survey agencies, research institutes, and government organisations to request information about high-quality large-scale probability-based surveys in the UK. Specifically, the request covered:

- All mixed mode surveys with online/paper modes only.
- All mixed-mode surveys that offer interviewer-administered modes, provided that a large proportion of responses are collected in self-administered modes.
- All online-only surveys.

The surveys covered could be either cross-sectional or longitudinal. For longitudinal surveys and panel studies, the focus was on self-completion stages, but not the main stage recruitment if it was done face-to-face. To be included in the review, surveys must have been collected within the five years since January 2019, and must be general population surveys, although surveys covering different age ranges or smaller geographic areas could also be included if they comply with the main criteria. Paper-only surveys were in principle in-scope for the review, but we found no examples that complied with the other inclusion criteria.

Nine organisations provided information about 88 different surveys[1]. In most cases, the organisations provided links to publicly available technical reports and contact details to enquire further information. For some specific surveys, the organisations shared unpublished technical reports, academic papers, and conference presentations to supplement their results. For all cases, the information received was supplemented by specialised web searches to retrieve additional technical and methodological reports from publicly available data sources. The number of surveys provided by each agency is listed in Table 2. Our original request focused on surveys carried out between 2019 and 2024, with a technical report publication cut-off date of 30 June 2024. However, we also received several relevant surveys from 2018 that were published by this date. As they provided valuable information about recruitment practices for self-administered surveys, we decided to retain them in the list, extending the period covered in our review to 2018–2024.

[1] Some surveys were reported by more than one agency. For example, the National Survey for Wales was reported by both the Office for National Statistics, and the Welsh Government. The grand total of 88 surveys excludes duplicates.

Table 2. Number of surveys by organisation

Organisation	Abbreviation	# Surveys
UCL Centre for Longitudinal Studies	CLS	9
Institute for Social and Economic Research, University of Essex	ISER	4
Ipsos	Ipsos	13
National Centre for Social Research	NatCen	22
Northern Ireland Statistics and Research Agency	NISRA	5
Office for National Statistics	ONS	21
Scottish Government	ScotGov	4
Verian (formerly Kantar Public)	Verian	9
Welsh Government	WelshGov	1
Total number of surveys (excluding duplicates)		**88**

All the reports and summaries received, alongside the additional information sourced from agency websites, were first screened to define a set of surveys in-scope for the review. 29 surveys (35% of the total) were excluded for the following reasons:

- 14 surveys were mainly face-to-face and were only submitted by the agencies because their sample design and/or fieldwork procedures contained elements of interest for other subprojects in the research strand (for example, targeted procedures or knock-to-nudge).
- 11 surveys used primarily telephone interviews (such as the National Survey for Wales) or a mixture of face-to-face and telephone interviews (such as the surveys reported by NISRA).
- 9 surveys could not be included because they were in the fieldwork stage or with data still being processed at the time of writing this review, meaning that no technical report is available.
- 5 surveys were excluded because they were out of the time scope of the analysis.
- Finally, the Annual Population Survey was excluded because it is not an independent survey (it takes place concurrently with the Labour Force Survey), and therefore no survey-specific technical reports were found.

The information about the remaining surveys was coded into an Excel spreadsheet, which contains a list of relevant indicators for all the surveys considered in the review. We used this spreadsheet to generate the summaries contained in this review.

3.2.2 Surveys

A list of 45 unique surveys remained after excluding the out-of-scope cases. While this includes a few one-time or experimental surveys which were only conducted once, most of the surveys analysed are repeated with a certain frequency. To facilitate the review, we consider each instance (e.g. sweep, wave, quarter, year) of a survey as a distinct record. We therefore analyse information about 106 survey instances, covering the period between 2018 and 2024. Table 3 lists the surveys included in the review. For simplicity, the table does not contain references to the technical reports of each survey. This information is provided in full in Appendix A.

Table 3. List of surveys covered in this review

Organisation Abbrev.	Code	Name	# Instances	Period
CLS	CLS05	Cross-cohort COVID-19 Web surveys	3	2020–2021
	CLS06	COVID Social Mobility and Opportunities Study	2	2022–2023
Ipsos	IPS01	Active Lives Survey	5	2020–2022
	IPS02	Food and You 2	7	2020–2022
	IPS03	REal-time Assessment of Community Transmission	2	2021–2022
	IPS04	GP Patient Survey	6	2019–2023
	IPS05	PAMCo–Audience Measurement for Publishers	3	2021–2023
	IPS06	Northern Ireland Life and Times Survey	4	2020–2023
	IPS07	My Life in the Highlands and Islands	1	2022
	IPS08	Childcare and early years survey of parents 2019: push-to-web trial	1	2019
ISER	USS01	Understanding Society	6	2018–2023
	USS03	Understanding Society [Innovation Panel]	6	2018–2023
NatCen	NAT05	Survey for Londoners	2	2019–2022
	NAT08	British Social Attitudes	4	2020–2022
	NAT09	Bike Life Survey/The Walking and Cycling Index	3	2019–2023
	NAT10	Financial Lives Survey	2	2020–2022
	NAT11	Public Confidence in Official Statistics	2	2021–2023
	NAT12	Generations and Gender Study	1	2023
	NAT13	Gambling Survey for Great Britain	1	2023
	NAT14	Gambling Participation and the Prevalence of Problem Gambling–Experimental Statistics	2	2023
	NAT15	The Health Survey for England 2020/2021 Feasibility study	1	2022
	NAT16	Adult Oral Health Survey 2019	1	2019
	NAT18	National Travel Attitudes Study	1	2019
	NAT19	NatCen Opinion Panel	1	2018–2024
ONS	ONS06	Opinions and Lifestyle Survey	3	2021–2023
	ONS12	Winter Coronavirus Infection Study	1	2024
	ONS13	Census 2021	1	2021
	ONS15	Census Coverage Survey	1	2021
	ONS16	Coronavirus (COVID-19) Infection Survey	2	2021–2022
	ONS17	Trust in Government Survey	2	2022–2023
	ONS21	Over 50s Lifestyle Study	1	2022
	ONS22	Coronavirus (COVID-19) Infection Survey [Northern Ireland]	2	2021–2022
ScotGov	SCO01	Health and Care Experience	3	2020–2024
	SCO02	Scottish Cancer Patient Experience Survey	1	2018
	SCO03	Maternity Care Survey	1	2018
	SCO04	Inpatient Experience Survey	1	2018
Verian	VER01	Community Life Survey	4	2018–2022
	VER02	Participation Survey	1	2021–2022
	VER03	Individuals, Small Business and Agents Customer Survey	5	2018–2022
	VER04	Survey on Attitudes to the Environment	1	2022
	VER06	DENZ/BEIS Public Attitudes Tracker	2	2022–2023
	VER07	High Street Action Zones Survey	1	2021
	VER08	Empowering Places	1	2023
	VER09	Public Voice Recruitment Survey	3	2020–2021
	VER10	Attitudes to Mental Illness	1	2023
Total number of instances			**106**	**2018–2024**

The breakdown of surveys by agencies does not necessarily reflect the contribution of each agency to the review, as some surveys are joint efforts between agencies – for example, the

Family Resources Survey (here reported as an ONS survey) is a joint effort between the ONS and NatCen.

3.2.3 List of survey indicators

We defined a list of indicators to extract from the methodological and technical reports before starting the review. We collected five types of indicators, defined as follows:

(i) *Characteristics*. These indicators provide a general description of each survey, including survey agency, commissioner organisation, time and place of data collection, sampling design and method, and the information contained in the reports (for example, whether the reports contain information about experiments conducted, when relevant).

(ii) *Modes of contact and administration*. These indicators provide some basic information about contact and response modes for each survey.

(iii) *Materials*. All the available survey materials – including initial letters, reminder letters and postcards, informative leaflets, and knock-to-nudge cards – were reviewed in a separate spreadsheet. This spreadsheet contains detailed records about the mode and timing of delivery, appearance, contents, and information provided.

(iv) *Incentives*. These fields identify the presence, type, timing, and mode of delivery of the incentives, as well as the amount provided for the monetary incentives.

(v) *Outcomes*. These include response rates (at either the household or the individual level, or both) and the achieved sample size for each survey. There is significant variability in the types of response rates reported by each survey, which makes inter-survey comparisons challenging.

The full list of indicators is provided in Appendix B.

3.3 Descriptive analysis

3.3.1 Survey characteristics

Ipsos is the agency with the highest number of survey instances reported (29), followed by NatCen (22), Verian (formerly Kantar, 19), and the ONS (13). The Scottish Government presents 6 instances from 4 surveys.

As previously mentioned, the data covers a period of five years, 2018 to 2023, extending up until mid-2024 for those surveys for which technical and methodological reports were available. Figure 1 shows the marked surge in the number of self-administered surveys during 2020 due to the COVID-19 pandemic, which reached a peak in 2021 and reduced in 2022 and 2023 as several recurrent surveys returned to face-to-face administration. 61% of the survey instances collected data between 2020 and 2022, the period most affected by COVID-19 lockdowns and restrictions.

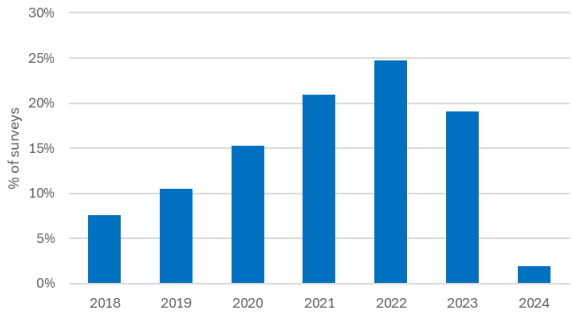

Figure 1. Survey instances by final year of data collection

In terms of topics, Table 4 shows that 42% of the survey instances collect data about what could be generally classified as "social attitudes and behaviour". These include general social surveys such as the British Social Attitudes survey or Understanding Society, but also more topic-specific surveys covering attitudes on aspects such as politics, the environment, healthcare, heritage, recreation, official statistics, and transport, among others. The next more important topics are health (14% of all instances), COVID-related topics (9%), consumer-related topics (9%), and finances and resources (7%).

As seen in Figure 3, most surveys (47%) are annual, with 27% conducted more frequently (from up to twice a month to every six months), and 15% less frequently (from every 2 years up to 10 years, in the case of the Census). 8% of the survey instances are one-time surveys. 2% were conducted intermittently (i.e., without a predetermined periodicity). These include the Covid-19 Cohorts and the COSMO survey (conducted by CLS) along with the Public Confidence in Official Statistics Survey and the Survey for Londoners (both conducted by NatCen). Most surveys are conducted across the whole of the UK (45%, see Figure 4), while 32% include observations from only one of the nations (England, Wales, Scotland or Northern Ireland).

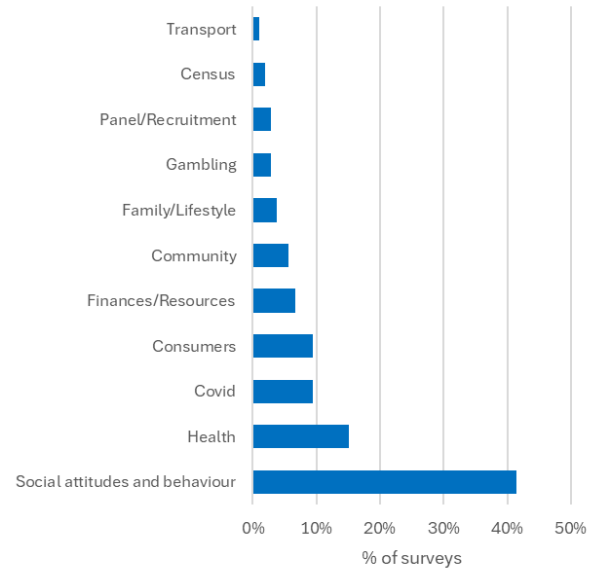

Figure 2. Proportion of survey instances by topic

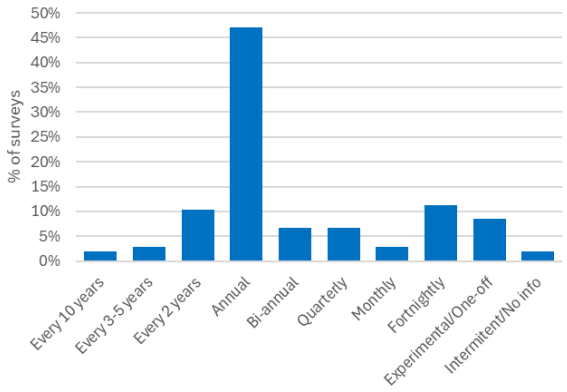

Figure 3. Proportion of survey instances by periodicity

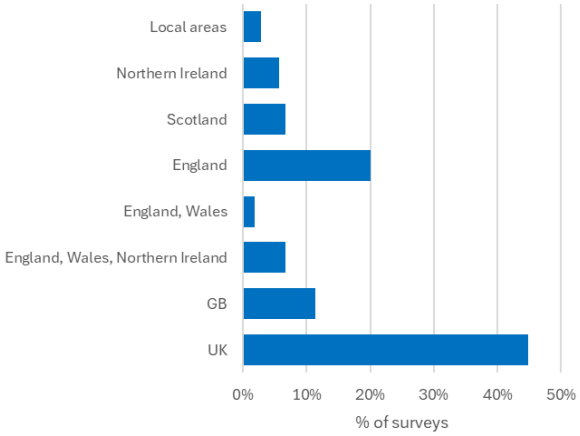

Figure 4. Proportion of surveys by geographic area

Table 4 summarises several characteristics of survey instances in the spreadsheet. Sampling design attributes are described in section 3.3.1.1, while completion times are discussed in section 3.3.1.2

Table 4. Summary of survey characteristics

Variable	Value	# Instances	% of total
Sampling design			
Target population	Individuals aged 16 or over	62	58
	Individuals aged 18 or over	18	17
	Others (more restricted)	26	25
Sampling frames	PAF (Households)	57	54
	Other address files (Households)	3	3
	Previous participants (Households)	12	11
	Named sampling frame (Individuals)	17	16
	Previous participants (Individuals)	13	12
	No information provided (Missing)	4	4
Sampling design	Cross-sectional	17	16
	Repeat cross-sectional	66	62
	Longitudinal	21	20
	Repeat cross-sectional/Longitudinal	1	1
	No information provided (Missing)	1	1
Sampling method	Simple random sample	10	9
	Systematic	7	7
	Stratified (*Clustered*)	17	16
	Stratified (*Unclustered*)	56	53
	Multi-stage	10	9
	No sampling (aims at full coverage)	5	5
	No information provided (Missing)	1	1
Survey completion time			
Median reported completion times (for web self-administration)	Less than 20 minutes	20	19
	20 minutes or more	30	28
	No information provided (Missing)	56	53
Mean reported completion times (for web self-administration)	Less than 20 minutes	5	5
	20 minutes or more	21	20
	No information provided (Missing)	80	75
Within-household selection (For household-based surveys, $n = 76$)			
Who is interviewed	One adult	7	9
	Up to two	27	36
	Up to three	8	11
	Up to four	6	8
	All adults	20	26
	Everyone in the household	3	4
	No information provided (Missing)	5	7
Method for within-household selection (when reported, $n = 71$)	All adults or everyone in the household	25	35
	Any adult	36	51
	Next birthday	6	8
	Most recent birthday	2	3
	Grid	2	3
Other characteristics			
Targeted procedures implemented	Yes	31	29
	No	75	71
Experiments reported	Yes	32	30
	No	74	70

3.3.1.1 Sampling design

Most instances were general population surveys, with 58% aiming at individuals aged 16 or over, and further 17% attempting to represent the population of individuals aged 18 or over. The England and Wales Census and the Census Coverage Survey are exceptions, as their target population included all residents of households in England. and Wales, along with people living in communal establishments like hospitals, prisons, and student halls. Other surveys worked with restricted target populations, seeking respondents belonging to specific age groups (8%) or participants of previous surveys who gave consent to be re-contacted (7%). The remaining surveys (7%) only selected participants who complied with other criteria including, for example, being registered at certain NHS practices, or having recently given birth.

As expected, most of the survey instances 68%) were household-based, with 54% using the Postcode Address File (PAF) as a sampling frame, and 4% using other address files including the AddressBase file from the Ordnance Survey. Individual-based surveys made up for a total of 28% survey instances, with 15% using named sampling frames. These included lists of NHS patients (GP Patient Survey, ReAct surveys, Over 80's Vaccines Study), the National Pupil Database NPD (COSMO), the Child Benefit Register CBR (Childcare and Early Years Survey), the Community Health Index database (Health and Care Experience), and the SMR01 Records of Acute Hospital Activity (Scottish Cancer Patient Experience and Inpatient Experience Survey). Finally, the reviewed surveys included examples of sampling frames derived from lists of participants in other surveys. These included follow-up waves of most longitudinal surveys (e.g. Understanding Society), and follow-up individual-level surveys including the National Travel Attitudes Survey, and the Opinions and Lifestyle Survey.

Most instances (62%) were repeat cross-sectional surveys, while 15% were single-instance cross sectional surveys. 20% of instances are waves of longitudinal surveys. The Survey of Attitudes to the Environment combined a longitudinal sample with fresh random samples added in each wave, the only survey in this review to use this method. Most survey instances (69%) used stratified sampling, either clustered or un-clustered. More complex methods including multi-stage designs were used in 10% of the survey instances. These percentages include the sampling design used in the first wave of the longitudinal surveys (the follow-up waves do not normally use a different sampling design except if sample boosts are implemented). It must be noted that simple random sampling and systematic sampling were used in 16% of the surveys, while 5% did not use any type of sampling, as they aim at full coverage of the population. This is the case for the 2021 England and Wales Census, the Scottish Cancer Patient Experience Survey, and the Cross-cohort COVID-19 Web surveys.

3.3.1.2 Survey completion times

Only a few technical reports provide information about survey completion times, with the median value provided more frequently. All these reports refer to the web component of mixed mode surveys, or online surveys. 33% of the survey reports state that their median completion times were equal to or higher than 20 minutes, with 9% reporting median completion times between 30 and 40 minutes, and 6% reporting over 40 minutes. The mean completion times were less frequently reported (only in 25% of the cases). Mean reported completion times were equal to or higher than 20 minutes in 12% of the survey instances. Six instances reported mean completion times of 50 minutes or over.

3.3.1.3 Within-household selection

Within-household selection can be a significant issue for surveys without field interviewers, especially those using address-based sampling, where no or very limited information exists about household residents. Among household-based surveys, 35% conducted interviews with all adults or all residents in the household. Within-household selection is carried out in 46 survey instances (65%), with "any adult" mentioned as the most frequent method ("any two" was reported in 25 instances, "up to three" and "up to four" in three each, and "one adult" in one occasion). The "next birthday" method was used in 8% of instances, and the last or most recent birthday is used in 3% of cases, while the Kish Grid was only used in both instances of the PAMCO survey. The Kish Grid method can only be successfully used in interviewer-administered modes, and this survey included a phase of "knock-to-nudge" (see section 3.3.2), during which field interviewers carried out the selection of participants. The method for within-household selection of individuals was not specified in 13 instances.

3.3.1.4 Other characteristics

Survey reports containing targeted procedures or experiments were identified. Targeted procedures can be widely defined as methods aimed to boost recruitment amongst specific population subgroups. These were reported in 29% of the survey instances. They include variations in survey communication materials and reminder frequency, response modes offered to specific groups, and differential sampling fractions and boost samples. Table 5 lists the surveys reporting targeted procedures, and a brief description of their nature. Some of these are implemented as experimental interventions and are thus analysed in the corresponding sections of this review[2].

Table 5. Summary of targeted procedures in the surveys

Agency	Survey	# Instances	Description
Ipsos	My Life in the Highlands and Islands	1	Letters encouraged participation from 16-29-year-olds, if present in the household.
	REal-time Assessment of Community Transmission	2	Differential incentives according to age group (experiment in wave 15, then implemented from wave 18 onwards)
Verian	Attitudes to Mental Illness	1	Deprived groups and/or the elderly receive more reminders and/or paper questionnaires than the rest of the sample
	Community Life Survey	4	The design requires usable sample sizes for each of the four most prevalent ethnic categories: White British, Asian, Black, and other groups (combined)
	COVID Social Mobility and Opportunities Study	2	Oversampling for pupils from more disadvantaged backgrounds
	DENZ/BEIS Public Attitudes Tracker	2	Deprived groups and/or the elderly can receive paper questionnaires with their invitation or reminder letters
	Individuals, Small Business and Agents Customer Survey	5	Deprived groups and/or 18–24-year-olds can receive paper questionnaires with their second reminder letter
	Participation Survey	1	Deprived groups and/or the elderly can receive paper questionnaires with their second or third reminder letter.
	Public Voice Recruitment Survey	3	Deprived groups, younger respondents and/or the elderly can receive two reminders instead of one, and a

[2] An evidence review on targeted procedures in UK surveys, currently in preparation, is also part of the Survey Futures project outputs.

Agency	Survey	# Instances	Description
			paper questionnaire with their second reminder letter. Oversampling for ethnically diverse areas.
	Survey on Attitudes to the Environment	1	Oversampling for rural addresses.
NatCen	Bike Life Survey/The Walking and Cycling Index	2	Face-to-face survey option offered in areas with high proportions of non-English speakers. Oversampling in these areas.
	Financial Lives Survey	2	A face-to-face option was added to engage the digitally excluded population, and the elderly. The survey was also adapted to telephone mode.
	Survey for Londoners	2	Differential sampling fractions and boost samples according to areas.
ONS	Census 2021	1	Households less likely to respond online were added to the "paper-first" group, where questionnaires were sent along with the invitation letter.
	Census Coverage Survey	1	Aims to allocate more sample in areas with low expected coverage ("hard to count" index

Survey methodology experiments were embedded in 32 survey instances in the spreadsheet. They were implemented concurrently with the main survey data collection, and they aimed to test the effect of an intervention on a desired outcome (which frequently involves response rates). Several experiments aimed to test several conditions simultaneously, including various experimental groups. Among the topics of interest for this review, the most frequent were communication materials (letter size, aspect, contents, in 14 experiments), and incentive strategies (11 experiments). Less frequent areas of experiments included mixed-mode strategies (6), and fieldwork procedures (2). These experiments will be discussed in further detail in the corresponding sections of this review. Experiments concerning questionnaire design and question wording (10), substantive survey information (5), consent to data linkage (6), within-household-selection, targeted procedures (1), and interview procedures (1), fall beyond the scope of this review.

3.3.2 Contact and administration modes

3.3.2.1 General overview

Table 6 displays the modes using for contact and administration in the reviewed surveys. Following conventional recruitment practices, most surveys use postal communications as their main contact mode. Post is the only contact method for 75% of the survey instances and is used in combination with other modes such as telephone or email in 14% of the cases (when this information was available). Interestingly, 4% of survey instances used knock-to-nudge as an additional contact strategy, in addition to the initial postal contact. In knock-to-nudge, interviewers visit sampled households and encourage respondents at the doorstep to participate in a non-face-to-face survey (telephone, paper or web) later. Surveys originally started using knock-to-nudge due to the specific and pressing restrictions imposed by the COVID-19 on face-to-face surveys. Knock-to-nudge was abandoned by several surveys as soon as these restrictions were lifted. However, there has been an increased interest among survey methodologists and survey practitioners considering the possible advantages of this approach, especially in an era where surveys are transitioning towards modes without field interviewers (see Domarchi *et al.*, 2025 for a review of evidence and current practice). For example, the European Social Survey in UK will include this in its 12th round in 2025 as part of

a non-response follow-up phase[3]. In addition, the PAMCo survey, the Transformed Labour Force Survey, and the National Survey for Wales (a CATI survey which plans to move towards online modes from 2026 onwards), are using knock-to-nudge in the post-pandemic context.

Table 6. Contact and administration modes

Dimension	Survey mode	Mode details	# instances	% of instances
Contact mode	Post only	–	80	75
	Post (combined with other contact modes)	Post, Face-to-face (knock-to-nudge)	4	4
		Post, Email	13	12
		Post, Email, Telephone	2	2
	Email only	Email	2	2
	No information (Missing)	–	5	5
Administration mode	Web	Web	11	10
	Mixed mode	Paper, Web	61	58
		Paper, Web, Face-to-face	1	1
		Paper, Web, Telephone	3	3
		Web, Face-to-face	3	3
		Web, Face-to-face, Telephone	12	11
		Web, Telephone	13	12
	No information (Missing)	–	2	2

The criteria specified in our information request ensures face-to-face-only and telephone-only surveys are excluded from the analysis. The most frequent response mode is mixed mode, used in 88% of survey instances. Different administration modes are offered sequentially to participants in 63% of these instances, and 55% of the total – most frequently, paper questionnaires are mailed along with reminder letters rather than with advance letters. The remaining 37% offer all available administration modes in a concurrent manner. This is notably the case for surveys combining web and telephone modes, where both options are usually available from the onset.

It is worth noting that 15% of the surveys offer face-to-face interviewing as an option for response as part of their mixed-mode strategies, while telephone interviews are offered in 26% of the cases. However, most mixed-mode survey instances are completely self-administered, with paper/web (offered in 58% of the instances) the most frequent option. Single-mode surveys via web represent 10% of the cases.

Figure 5 illustrates how the distribution of survey modes changes over time. COVID-19 lockdowns and restrictions in place from 2020 until 2022 might appear to explain the large number of telephone and online surveys that are observed during this period. Several surveys usually conducted face-to-face were forced to switch to modes without field interviewers due to these restrictions. In some cases (e.g., the 2020 Scottish Health Telephone Survey and the 2021 Telephone Crime Survey for England and Wales), shortened versions of the face-to-face questionnaires were implemented for the occasion, and the regular version of the survey

[3] There are differing terms for knock-to-nudge strategies in the surveys that use it. In the European Social Survey, the knock-to-nudge approach is called the "fieldworker phase", while in the PAMCo survey, it is known as the "field stage".

resumed as soon as COVID-19 restrictions were lifted. As these surveys were still interviewer-led, they do are not reviewed in detail in this document.

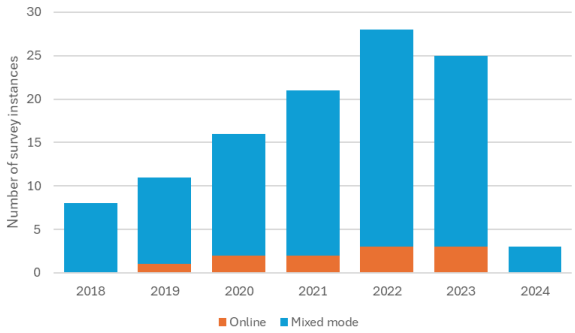

Figure 5. Survey instances by mode and year

3.3.2.2 Applications and experiments

The effectiveness of several designs of communication strategies has been experimentally tested for some surveys in our spreadsheet. Examples include the GP Patient Survey (GPPS) and Understanding Society.

The GP Patient Survey (GPPS) is a repeat cross-sectional, annual self-completion survey designed to represent patients of GP practices across England. This survey uses a list of NHS patients with contact details as its sampling frame. While primarily postal, the proportion of online responses has steadily increased over time. The usual communication strategy involves a concurrent design, with an advance letter including the questionnaire, followed by two additional full reminder mailings (letters and questionnaires) sent to non-respondents, each accompanied by an SMS reminder one week later. Prior to 2021, a postcard reminder was sent after the invitation letter and before the first reminder letter instead of the SMS reminder. An experiment conducted in 2021 (Ipsos, n/d-b) tested alternative contact strategies including: i) replacing the postcard with alternative contact mode (SMS only or alternating between email messages and SMS), ii) offering a link to the online survey first, followed by paper questionnaires in later mailings, and iii) sending an additional SMS reminder. While no significant effects on response rates were found for any of the three strategies, a positive and significant effect on the share of online responses was found when replacing the postcard reminder with SMS reminders. This communication strategy was therefore carried forward to future versions of GPPS (Ipsos, n/d-c). As the sequential push-to-web strategy was associated with a slightly lower overall response rate, but a much higher percentage of surveys completed online, this strategy was tested again in the 2022 version of GPPS (Ipsos, n/d-d). The results confirmed that sequential push-to-web had a small negative impact on response rates but was significantly effective at encouraging participants to take part online, which is the preferred response for the agency as it reduces printing, scanning and postage costs. The agency analysed the differences between the experiment groups and the main survey across a range of key survey estimates and demographic profiles, and the analysis found no significant differences between them. The sequential push-to-web strategy was therefore carried over to future versions.

Three other experiments were carried out as part of the recruitment stage for a refreshment sample conducted during wave 11 of the Understanding Society Innovation Panel (Al Baghal *et al.*, 2024), two of which (first and third) are relevant for mixed mode-designs. The first

experiment tested two approaches for the initial mode of data collection: i) CAPI-first, in which the invitation letter informed the residents that an interviewer would visit them to seek personal interviews, and ii) Web-first, in which the invitation letter invited respondents to participate in a web survey. In the third experiment, households receiving the Web-first invitation were split into two treatment groups: i) explicit CAPI, in which the invitation letter offered the opportunity to be visited by an interviewer if the respondent was unable to participate online, and ii) delayed CAPI, in which neither the invitation nor the first reminder letter mentions the interviewer option. The experiments provided no evidence that the web-first protocol is any less successful than the CAPI-first protocol in terms of achieving household participation. However, there is evidence to suggest that the proportion of households responding fully (i.e., all individual interviews completed) is significantly higher with the CAPI-first protocol. Similarly, there is evidence that notifying households from the onset that there will be a CAPI follow-up can increase the proportion of households participating online.

The general conclusion of these experiments is that offering different mode options to participants does not appear to have a significant effect on overall response rates. However, the sequence in which response modes are offered to participants, as well as the emphasis that communication materials place on each mode, can significantly impact the choice of response mode. Increasing the proportion of online responses is a positive result from a cost planning perspective, as the unitary costs of online surveys are significantly lower than the costs of interviewer-led surveys.

3.3.3 Communication strategies

3.3.3.1 General overview

The technical reports of 90 out of the 106 survey instances reviewed (90%) provide a description of their communication strategies and list the materials received by households and individuals in the sample. The general communication strategy is similar across surveys, starting with an advance communication (most frequently, an invitation letter, as previously discussed in section 3.3.2), which is usually followed by one or more reminders. Figure 6 illustrates the distribution of the number of reminders across survey instances.

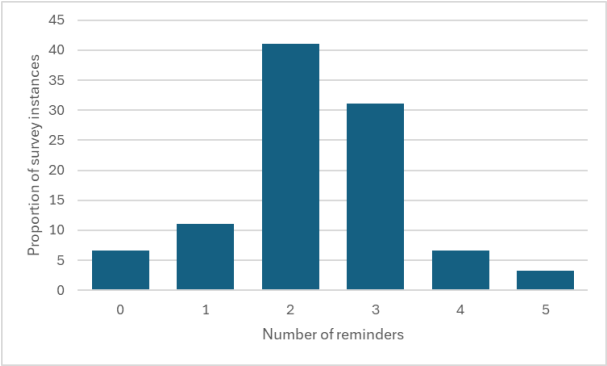

Figure 6. Number of survey instances by number of reminders sent

While there is a great variability in fieldwork procedures across surveys, the most frequently used strategy includes two reminders (41% of survey instances), while three reminders are used in 31% of survey instances. The first reminder is most frequently sent two weeks after the invitation (39%), or between one and two weeks after the invitation (24%). Most sequential mixed mode surveys sent the first reminder two weeks after the invitation letter,

while in concurrent mixed mode surveys, the reminder is more frequently sent seven or ten days after the invitation letter. In most cases, reminders are sent to non-responding addresses only, with 15% sent to the full sample, even though some households have already responded.

3.3.3.2 Applications and experiments

In the reviewed surveys, the general design of the communication strategy involves the same communication materials sent to the full sample (in the case of advance or invitation letters) or non-responding units (in the case of reminders). However, some experiments on the potential benefits of targeting communication materials to specific groups in the population, have been conducted in some surveys.

An experiment was conducted as part of the 2020-21 version of the Community Life Survey (Kantar Public and Department for Digital Culture Media & Sport, 2021) on the effects of including two paper questionnaires with the second reminder letter. This survey aims at interviewing all adults in the household. Including these questionnaires raised overall response rates modestly but reduced the share of web responses. This was an undesired effect, as the paper questionnaire covered a subset of the web questionnaire only and as reported by the survey agency, paper responses generally yielded poorer quality data than the web questionnaire. Subgroup analyses of the results of these experiments revealed some population strata where these drawbacks outweighed the modest response rate increases brought by the intervention. Following the results of this experience, several surveys conducted by Verian started using a targeted approach. These surveys include the Community Life Survey, the Participation Survey, the HMRC Customer Survey for Individuals, the Survey on Attitudes for the Environment, the DENZ/BEIS Public Attitudes Tracker, the Empowering Places Survey, the Public Voice Recruitment Survey, and the Attitudes to Mental Illness Survey. All these surveys use an adapted contact strategy which, although defined slightly differently for each survey and geographic unit, follows the same basic principle. The issued sample of addresses is divided into strata, which are defined by two variables: the Index of Multiple Deprivation (IMD), and the expected number of residents aged 18 to 24 years old. This latter variable is provided by an external organisation (CACI) and comprises a mixture of real data and data generated by predictive algorithms. A different mix of communication protocols is then used in each of the resulting strata. Two variables can be manipulated for this purpose: the inclusion of paper questionnaires with the final reminder and the number of reminders. The optimal communication strategy varies across surveys but, as a general criterion, paper questionnaires are included with communication materials mostly for the elderly groups and the most deprived areas. The most deprived areas also tend to receive a higher number of reminders compared with the least deprived areas. The approach has been effective in maximising response rates in each stratum and minimising the inter-stratum variability of response rates (Williams, 2024).

Other experiments have focused on different aspects of communication strategies. For example, the 2022 GP Patient Survey (Ipsos, n/d-d), an annual self-completion survey designed to represent patients of GP practices across England, tested whether an email message linked to a SMS could effectively replace the traditional postal invitation letter, with no significant effects found on either response rates or the share of online responses. During the following year (Ipsos, n/d-e), an intervention was tested in which an email message replaced the first postal reminder. This intervention had a positive and significant effect on response rates. These types of interventions are only possible for surveys with a named

sampling frame, where contact details are available for all members. The GPPS is one of such cases, as it uses a list of GP patients in England as its sampling frame.

Similarly, the 2019-2020 version of the Active Lives Survey (ALS; Ipsos, 2020), conducted an experiment in which invitation letters sent to respondents were amended to include information about how many people in the area had already completed the survey. It was hypothesised that respondents might have assumed the same behaviour as others in their area and therefore be more inclined to complete the survey. However, there was no significant change in response rates due to this intervention, and this messaging strategy was discontinued.

Finally, wave 11 of the Understanding Society Survey included an experiment in which the usual contact strategy of emails and letters was supplemented with text messages (Cabrera-Alvarez and Lynn, 2023b). As this is a longitudinal survey, contact details are generally available for respondents in previous waves. The results show that adding text messages to a contact strategy that includes letters and emails improves web survey response rates for those who shared a valid mobile number and email at previous waves. These results corroborate previous experiences in the literature, which have found that combining text messages with other contact modes can produce modest increases in response rates only.

3.3.4 Communication materials

3.3.4.1 General overview

Analysis of the technical reports reveals a grand total of 349 different communication materials used in the 90 survey instances that provide a description of their communication strategies (the remaining 15 do not provide any details). As a response to our information request, the agencies submitted 217 documents belonging to 52 survey instances. The proportion of available documents is 62%. Table 7 provides the breakdown of survey materials available. Most materials (81.2%) are letters, including advance letters, reminders, and other types of letters (for example, recontact or conversion letters). Postcards, emails and SMS are less frequent in the spreadsheet.

Table 7. Types of documents available

Format	Type	# Documents	% of documents
Letter	Invitation	56	26
	Reminder	114	53
	Other letters	4	2
Email	Invitation/Reminder	30	14
Postcard	Introductory/Reminder	4	2
SMS	SMS reminders	9	4
Total		**266**	**100**

76% of the reports reviewed mention using a communication approach that follows Don Dillman's Tailored Design Method. Only four survey instances in our review (the Census 2021 and the Gambling Participation survey) state following the Respondent Centred Design approach devised by Wilson and Dickinson (2023). The remaining technical reports (20%) do not report following any specific strategy. Characteristics of the communication materials are analysed in the following sections of this review.

3.3.4.2 Characteristics of the communication materials

a) Letter personalisation

While most letters are not (and cannot be) personalised and are directed to "the resident(s)" of each household, some surveys use informative sampling frames that allow sending personalised letters to participants. These include the GP Patient Survey, and the push-to-web trial of the Childcare and Early Years Survey of Parents. Follow-up waves of longitudinal surveys such as Understanding Society can also personalise their communication materials, as they usually have full contact details of respondents from previous waves.

b) Letter appearance

The general appearance of the letters is similar across surveys, with only slight variations. Most letters are sent in C5 size envelopes containing A4 size letters, except for the Active Lives Survey, which states using C4 size envelopes. All surveys employ letters and envelopes printed in white paper for their communications. The sole exception was observed in an experiment implemented by the GP Patient Survey in 2023 (Ipsos, n/d-e), where manila (brown) envelopes were tested against the traditional white envelopes. The intervention was part of a factorial experiment which also tested interventions related to questionnaire length and modes of contact. The manila envelope seemed to improve overall response rates compared to the white envelope, although the effect was only moderately significant at 10% ($p = 0.08$).

c) Letter colouring

The general layout of the letters is similar across surveys, and includes mostly black or grey text, with limited font colouring (usually of a higher font size) used to highlight section titles or specific words. Small illustrations and logos are used only sparingly. The most used secondary colours in the letters are green (appearing in 38% of the documents in one of several possible shades from light to dark green), blue (21%, from cyan to navy), orange (20%), pink (15%), and red (5%).

Some experimental work has been conducted to support letter colouring decisions. For example, the original version of the Active Lives Survey communication materials utilised a light blue colour pattern. In the 2020-21 version (Ipsos, 2021), an alternative design for the first reminder letter using a different, red colour palette. According to the agency, the first reminder letter in this survey is particularly relevant because improved engagement at this stage may increase the proportion of online returns, which are more cost effective. The experiment was conducted across several waves of the survey, with a significant effect on response rates found only in the first. However, the results might have been confounded with the outbreak of COVID-19 and the initial lockdowns. The evidence of a positive effect of this updated colour palette was limited, but there was no evidence of it having a detrimental effect in any wave. Considering this, the new designs for the letters were carried forward to the next versions of the survey.

d) Logos

All the letters reviewed featured organisation logos that represent the organisation conducting the survey or, more frequently, the survey commissioner. Experimentation in this field has been limited. The 2022 version of the GPPS (Ipsos, n/d-d) tested whether including the NHS logo might improve response rates, especially after the effects that the COVID-19 pandemic might have had on public perceptions about the NHS. However, no significant effects were found on response rates due to this intervention. Similarly, when Understanding Society recruited a new general population sample to boost their panel, they set up an

experiment on the use of a government logo on the invitation envelope. The assumption was that residents would be more likely to open the envelope with this logo as the name "Understanding Society" might not be meaningful for new participants. A significant effect was found – households receiving the invitation envelope with the government logo had a response rate of 28%, compared to the 20% response rate for households receiving the standard Understanding Society envelope (Vine *et al.*, 2024). This intervention was later tested during Wave 16 of the Understanding Society Innovation Panel, in which only individuals who had already taken part in the study in previous waves were invited to participate. No significant effect was found in this case, and the results suggest that for the most recently recruited members of the sample, a detrimental effect in response rates might exist. The survey agency decided against using government logos on the existing sample but expect to use them in the initial recruitment wave for their next boost sample (Vine *et al.*, 2024).

This finding is interesting as it appears somewhat contradictory to the recommendation provided by Dillman *et al.* (2014, p. 234) who state: "*if possible, use a recognized and respected logo with the return address*" to ensure survey mailings will not be mistaken as junk mail by household residents. As participants of follow-up waves in longitudinal surveys have previously received communication materials from the survey, and interacted with the agency to provide their responses, this additional precaution might have been perceived as unnecessary. While possible reasons for this result are not discussed, this experiment highlights the need to target communication materials to their intended audience.

e) Additional information and materials

In most cases (80%), mailings include additional materials and documents. These can be frequently asked questions sheets (40%), informative leaflets (20%), and paper questionnaires (11%). Experiments on these materials show that they can have some effect on response propensity. During the COVID-19 pandemic, the Active Lives Survey tested the effects of including a new leaflet, designed to reassure the public to participate in the survey by underlying the significance of the survey for understanding the impact of the pandemic "on people's lives, their ability to stay active, and overall wellbeing" (Ipsos, 2022a). Response rates were significantly greater when the insert was included with all the mailings, although the effect over time was strongly correlated with the type of lockdown restrictions implemented. The leaflets were included in all subsequent mailings during the COVID-19 pandemic.

f) Letter contents

Most communication materials (77%) include a statement reminding household residents that their participation is entirely voluntary. Similarly, most letters (78%) include an assurance to respondents stating that data will be handled confidentially and will only be used for research and statistical analyses. This text can be included either on the letter body, or in enclosed FAQ leaflets and materials. Only 18% of the reviewed materials mention a deadline for responding to the survey. These are mostly included in reminder letters. A smaller fraction (7%) contains an invitation to respond "as soon as possible", without referencing a deadline. Expected completion times and/or survey length are referenced in only 53% of the materials. The most frequently indicated estimated completion time is 30 minutes (29% of the cases). All the letters and communications include contact details for the survey agency. This is most frequently a helpline number (94% of the cases) but can also include email addresses and web addresses. All survey materials (97%) are signed by an authorised representative of the commissioner or the survey agency in charge of the data collection process.

We found five survey instances where experiments about letter contents were reported. The 2017-18 of the Active Lives Survey (Ipsos, 2019) tested whether the wording of their second and third reminder letters was pushing more people to the online questionnaire and less people to the postal questionnaire. Letters with simplified wording were tested in an experimental setting, along with simplified graphic elements, and the use of a graphical representation for the postal questionnaire. These minor changes resulted in increased response rates.

The 2021-22 Active Lives Survey (Ipsos, 2023a) tested changes in the wording of invitation letters along with the inclusion of QR codes for access in the invitation letter and the first reminder[4]. The text changes included giving a larger font size to the section of the letter that explain why taking part is important. The QR codes were included on the highlighted block of text in the centre of the mailings, in addition to the website URL already provided. The experimental groups achieved higher household response rates[5] and generated more returns per household than the control group (which did not include any intervention). Additionally, the changes increased the percentage of respondents completing the survey online rather than using the paper questionnaire. The QR codes were more effective, while the text changes themselves had little to no effect. Due to the positive impact on response rates, both the QR codes and the text changes were carried forward to future instances of the survey.

The experiments conducted in the 2019 version of GPPS (Ipsos, n/d-a) tested design changes to the initial postcard and modified versions for the communication materials which included revised messaging, including messages designed to tap into motivations to participate, highlighting the online log-in details, and improving the visual appeal by using bullet points and boxes. Additional interventions included changing frequencies of reminders (a three-week interval between reminders was tested, the then current interval was four weeks). None of the interventions had a significant effect on response rates. However, some of the changes to materials increased the percentage of respondents taking part online. In addition, reducing the time between reminders resulted in more responses earlier in the fieldwork period.

The 2018-2019 version of the Community Life Survey (Kantar Public and Department for Digital Culture Media & Sport, 2019a) included an experiment in which different letter types were sent to respondents during the second quarter of the fieldwork stage. The sample was split in two groups, with one group receiving new letter content, and another one receiving the same letter used in the first quarter of the fieldwork stage. The experimental group included changes in all three letters (invitation, first reminder, and second reminder). The experimental invitation letter included emphasised text about the societal value of the study, while the first reminder added text about the individual's value of the study, and the second reminder letter added emphasised text about the incentive reward. The experiment letter produced non-significant increases in individual and household response rates compared to the control letter, while the modified advance and second reminder letter outperformed their control counterparts. However, the first reminder letter did not improve on the control letter in terms of response rates.

[4] Questionnaire access methods are explored further in section h).

[5] Response rate for the groups providing QR codes were 21.0% (with text change) and 21.1% (without text change), compared to the 19.6% response rate for the control group.

Finally, the 2020 Financial Lives Survey (Financial Conduct Authority, 2021) included an experiment looking at whether different types of invitation letters would have an impact on response rates. Six experimental groups were implemented in the experiment, based on two conditions: type of letter (letter used in the first wave, letter used in the pilot survey, new letter) and tagline on the envelope (present, absent). No significant differences were found in response rates across groups, and there were also no differences in terms of demographic variables.

In all these experiments, the overall effect of minor design and wording changes in invitation and reminder letters on response rates seems to be relatively limited. However, wording changes can effectively induce participants to respond in a specific mode. The strategy can be more effective when combined with other changes in letters and materials, including graphic and design features and questionnaire access methods. In addition, some interventions can be cost-beneficial in reducing survey costs by driving participants to online modes, reducing printing and scanning costs, and/or reducing the number of mailings, without significantly affecting response rates.

g) Language translations

Only 48% of the survey materials reviewed indicate that the survey is available to respond in a language different than English. These include the GP Patient Survey, which is available in 14 languages, and Understanding Society, available in eight languages. Most frequently, the only other language available is Welsh (for addresses located in Wales). This option is offered in the DENZ/BEIS Public Attitudes Tracker Survey, the Family Resources Survey, the Food and You 2 Survey, the Active Lives Survey, and most ONS surveys for which materials were available to review. In these cases, participants are provided with a web link to access the survey in Welsh, with paper questionnaires in Welsh also available upon request.

h) Questionnaire access

The most frequently offered method for questionnaire access is web login (all instances), followed by telephone access (40%), either to book a telephone interview or to request a paper questionnaire. Enclosed paper questionnaires are less common (only included with 29% of the reviewed survey communication materials), and quick response (QR) codes for web access are only offered sparingly (10%).

Questionnaire access methods have often been tested in experiments in the reviewed surveys. As previously mentioned, the 2022 version of the GPPS (Ipsos, n/d-d) tested the use of QR codes as a questionnaire access method. While the inclusion of a QR code appeared to increase overall response rates, the effect was non-significant.

The 2021-22 version of ALS (Ipsos, 2023a) conducted an experiment with QR codes. A previous experience (in 2017) resulted in the use of QR codes producing lower response rates due to a drop in postal response offsetting the increase in online response. However, the use of QR codes significantly increased in recent years due to technological improvements and the COVID-19 pandemic, and therefore a different result could be expected in 2022. This intervention was tested in a 2 x 2 experimental setting, along with modified versions of the letters, in which a larger font size was used in the section that motivates individuals to participate. While the text changes did not produce any significant effect in response rates, the QR codes appear more effective, increasing overall response rates between 1.1 and 1.5 percentage points with respect to the experimental conditions without QR codes. Still, the technical report does not indicate whether these effects are statistically significant.

In the first wave of the Generations and Gender Study (Howe *et al.*, n/d), conducted online-only, an experiment was carried out to examine the impact of providing QR codes with URLs versus URL links only, in the invitation and reminder letters. The results suggest that respondents who received letters with a QR code were more likely to participate and to use smartphones, rather than PCs and desktops, to complete the survey, compared to those who received letters with URL links only. No significant differences in data quality were observed between the two conditions, indicating that QR codes show promise for future survey data collection (Maslovskaya *et al.*, 2025).

The Active Lives Survey has also tested other means of questionnaire access. The survey aims to interview up to two adults in each household. However, they have found that around 15% of two-person households provide responses attributed to a just one household member. The 2018-19 version of the survey (Ipsos, 2020) included an experiment designed to explore whether the proportion of two-person households with two interviews could be increased t. The sample was divided into three groups – in the first experimental group, the first respondent was presented with the option of sending a survey URL to a second member of the household via an email. There was also a soft check to confirm whether the second respondent lived in the same household, with a Yes/No response option. The second experimental condition was identical to the first, but with a hard check request for the second respondent to provide their postcode and confirm that they resided within the same household as the first respondent. In the control group, respondents were not presented with the option of sending a survey link to a second member of the household upon questionnaire completion. The experiment found no significant changes in the number of survey returns per household as a result of the intervention.

3.3.5 Incentivisation strategies

The survey methodology literature acknowledges that incentivisation is an essential component of the recruitment strategy, as incentives can have a significant effect in increasing response rates. The following sections review the incentivisation strategies of the surveys reviewed. We first provide a general overview in section 3.3.5.1, followed by a review of targeted incentives (3.3.5.2), and experiments (3.3.5.3).

3.3.5.1 General overview

97 out of the 106 survey instances reviewed (92%) provide information about their incentivisation strategy. Of these, 17 instances (18%) state that they did not provide any incentives to participants. Most of these instances are healthcare-related surveys, including the GP Patient Survey (Ipsos), the four Scottish Government surveys covering healthcare-related topics (Inpatient Experience Survey, Maternity Care Survey, Cancer Patient Experience Survey, and Health and Care Experience), and several Covid-related studies (Cross-Cohort COVID-19 Web surveys, Winter COVID Infection Study, Over 80's Vaccines Insights Study). Also included in this group are the 2021 England and Wales Census, the Census Coverage Survey, and the Trust in Government Survey. Incentives were provided in the remaining 80 survey instances (95% of those have information available). In most cases (79%), only conditional incentives were provided, while 5% include both conditional and unconditional incentives, as listed in Table 8:

Table 8. Summary of incentive types

Type of incentives	# Instances	% of instances
Unconditional only	12	15
Conditional only	60	75
Combination	4	5
No info (Missing details)	4	5
Total	**80**	**100**

The 12 survey instances that only provide unconditional incentives are waves of the regular Understanding Society survey, and its Innovation Panel. Unconditional incentives were provided in combination with conditional incentives in the Cross-Cohort COVID-19 Web surveys, Wave 2 of the COSMO survey, and the Childcare and Early Years Survey of Patients 2019. In all these cases, all the unconditional incentives were monetary and sent along with invitation letters in the form of vouchers or e-vouchers.

Conditional incentives are provided on their own, or in combination with unconditional ones, in 75% of the survey instances. These were, without exception, monetary incentives, and all were provided as vouchers or e-vouchers. In most cases (92%), a single monetary amount was delivered to all respondents. The most common figure was £10 (52% of instances with conditional incentives), followed by £5 (28%), £15 (7%) and £20 (5%).

The 2018-19 Survey of Londoners started offering a £5 conditional incentive upon survey completion; however, this was increased to £10 due to low initial response rates. The report does not clarify whether the increased incentive had a significant effect on improving response rates. The 2021-22 version of the Survey for Londoners offered a £10 conditional incentive from the onset; however, overall response rates still went down from 23.7% (in the 2018-19) to 20.7%.Finally, respondents of the 2021 Scottish Health Survey were offered a conditional incentive of £20 upon survey completion, and an additional voucher of £10 upon completion of a supplementary online food diary reporting details of their food and beverage consumption over two days. Despite the possible complexities of online completion of this food diary, around 75% of the main survey adult respondents provided complete records.

3.3.5.2 Differential incentives

Some surveys implemented differential incentives to increase the participation of certain predefined subgroups of the sample, both of in experimental and non-experimental settings. Table 9 summarises these experiences.

Table 9. Summary of surveys implementing differential incentives.

Design type	Survey	Survey	Instance	Configuration	Results
Experimental	COSMO	CLS	2022	· Students attending schools with highest proportion of pupils eligible for free school meals: £20 · Remaining respondents: £10	· Higher incentives associated with higher response rates
Experimental	COSMO	CLS	2023	· In addition to the differential incentives in COSMO 2022, an early bird bonus of £10 was offered to all participants.	· Higher incentives associated with higher response rates
Experimental	Food and You Survey	IPSOS	Wave 1	· Experimental group 1: £15 for early completions, £10 otherwise. · Experimental group 2: £15 for early completions, £5 otherwise. · Control group: £10 in all cases.	· Highest response rates in Experimental condition 1, lowest in Experimental condition 2.

Design type	Survey	Survey	Instance	Configuration	Results
					• Proportion of online responses increased significantly in both experimental conditions.
Non-experimental	Cross-Cohort COVID-19 Surveys	CLS	Wave 2	• Next Steps participants who had been respondents in Wave 1: £5 (unconditional) • Next Steps participants who had not been respondents in Wave 1: £10 (conditional)	• Response rate was higher among those who took part in the first wave of the survey
Non-experimental	Cross-Cohort COVID-19 Surveys	CLS	Wave 3	• Next Steps participants who had been respondents in the previous two waves, and those who participated in Wave 1 but had not been invited to take part in Wave 2: £10 (unconditional) • All other Next Steps participants: £10 (conditional) • 75% of randomly selected Millennium Cohort Survey participants: £10 (conditional) • 25% remaining MCS participants: No incentive	• Response rates in the Next Steps cohort went from 20% in Wave 1, to 32% in Wave 2, and 29% in Wave 3. • Response rates in the MCS cohort went down from 24% in Wave 2 to 22% in Wave 3.
Experimental	REACT Study	ONS	-	• Experimental group 1: £10 (conditional) • Experimental group 2: £20 (conditional) • Experimental group 3: £30 (conditional, only for people between 18-32 years of age) • Control group: No incentives	• £10 incentive provides the highest increase response rates for 13- to 17-year-olds and 33- to 42-year-olds • £20 incentive provides the highest increase in response rates for 18- to 22-year-olds and 23- to 32-year-olds
Experimental	Generations and Gender Study	NatCen	Stage 1	• Experimental group 1: £10 (conditional) • Experimental group 2: £15 (conditional) • Experimental group 3: £20 (conditional)	• The higher the value, the higher the response rate • Little differences in response rates by groups, the exception is IMD: participants in the 10% of the most deprived areas were less likely to respond to £10 incentive (only significant at 10% level)
			Stage 2	• Addresses within the 10% most deprived IMD: £20 (conditional) • Rest of the sample: £15 (conditional)	• Higher proportion of responses from participants with lower education, 18-29, non-White ethnic groups.

For example, during the first wave of the COVID Social Mobility and Opportunities Study (COSMO, 2022), a higher voucher value of £20 was targeted at students attending schools with the highest proportion of pupils eligible for free school meals (17% of the final sample). The remaining respondents received a voucher for a lower monetary value (£10). During the online stage of the second wave of COSMO (2023), all respondents were offered an early bird bonus, which implied that early-bird respondents allocated to the standard incentive group were offered £20 instead of £10, and early-bird respondents allocated to the higher incentive sample group were offered £30 instead of £20. In general, higher incentives were associated with higher response rates – the lower incentive group yielded a 72.4% response rate compared to the 82.9% obtained in the higher incentive group.

In Wave 1 of the Food and You 2 survey (IPSOS), an experiment was conducted to test the effect of early-bird incentives in persuading participants to opt for responding to the online version of the survey (as opposed to choosing the printed questionnaire, which was sent to households along with the third reminder letter). The experiment included two experimental treatments and a control group. In the first experimental group, participants were offered £15 for completing the questionnaire before first reminder dispatch (9 days after the advance letter). If participants took part after the first reminder dispatch, they would be offered £10. In the second experimental group, participants were also offered £15 for early completions, and participants taking part after the first reminder dispatch would only be offered £5. In the control group, all participants were offered £10 on survey completion. The higher overall response rates were obtained with condition 1, and significantly lower response rates were obtained with the second experimental condition. However, the proportion of online responses increased significantly in both experimental conditions, compared to the control group, indicating that the targeted incentives might have been effective in persuading participants to use this response mode.

Similarly, Wave 2 of the Cross-Cohort COVID-19 Surveys provided incentives only for Next Steps panel participants. If they had also been respondents in the first wave of the survey, they received an unconditional incentive of £5. Those who had not participated in the first wave did not receive an unconditional incentive but were offered a £10 conditional incentive. The response rate among those who took part in the first wave of the survey was 81%, while for participants who were not part of the first wave, a response rate of 22% was observed. In Wave 3, respondents who participated in the previous two waves were offered a £10 unconditional voucher, along with those who had participated in Wave 1 but had not been invited to take part in Wave 2 due to a missing email address. All other Next Steps participants were offered a £10 conditional voucher on completion of the survey. These measures were taken as response rates for the sample of Next Steps participants during the first wave of the study were significantly lower than response rates in the samples of the other cohort studies and resulted in increased response rates for the subsequent waves. Specifically, response rates in the Next Steps cohort went up from 20% in Wave 1 to 32% in Wave 2, and 29% in Wave 3. Incentives were also introduced to MCS cohort members in Wave 3, with a randomly selected 75% of the cohort being eligible for a £10 conditional voucher. The remaining 25% did not receive any incentive. Response rates in this cohort went down from 24% in Wave 2 to 22% in Wave 3 (Brown *et al.*, 2021).

The REal-time Assessment of Community Transmission Study, conducted by the Office for National Statistics, designed an experiment on targeted incentives for certain age groups in the population. The survey aimed to collect COVID swabs on a representative sample of the UK population during the COVID-19 Pandemic. The first waves of the study yielded a sample that was skewed towards younger age groups, as they had a low propensity to respond and a high COVID-19 prevalence. Participants of the sample were randomly allocated to four groups: the first group were offered a £10 conditional incentive, the second group were offered a £20 conditional incentive, the third group were offered a £30 conditional incentive that was offered only to people between 18 and 32 years of age, with the rest of the sample not receiving any incentives. A control group received no incentives. The results of the experiment reveal that the provision of incentives significantly increased response rates, especially for age groups with lower response propensity. The more effective incentive amount appears to vary among age groups – while a £10 conditional incentive provides the most significant increase

in response rates for 13- to 17-year-olds and 33- to 42-year-olds, the highest increase in response rates for 18- to 22-year-olds and 23- to 32-year-olds appears in the £30 conditional incentive groups, followed by the £20 conditional incentive groups.

Finally, during stage 1 of the Generations and Gender Study, an experiment was conducted in which conditional incentives of either £10, £15, or £20 were offered. Stage 2 used a targeted differential incentive based on index of multiple deprivation (IMD) deciles, where addresses within the 10% most deprived IMD were offered a higher incentive of £20 while the rest of the issued sample were offered £15. While work on the analysis of these data is still in progress, the £20 voucher is associated with higher responses from those with lower education, young people, and those non-White in Stage 2.

Notwithstanding their widespread use in other countries (including the USA), surveys in the UK context have used differential incentives less frequently, mostly due to concerns about expectations of equity among participants (Nicolaas, 2024). While the UK-based evidence is still limited, experimental findings show that differential incentives can be a cost-effective tool for recruiting harder-to-engage population subgroups and decreasing non-response biases.

3.3.5.3 Other experiments on incentivisation

Other experiences on incentivisation strategies conducted by the surveys reviewed are summarised in Table 10. Rather than targeting specific groups of the population, these experiences aimed to test different types of incentivisation, including non-monetary incentives, early-bird incentives, unconditional incentives, e-vouchers, and prize draws.

Table 10. Summary of surveys testing different types of incentives

Design type	Organisation	Survey	Instance	Configuration	Results
Experimental	Childcare and Early Years Survey of Parents	IPSOS	2019	· Experimental group 1: £5 (conditional) · Experimental group 2: Tote bag · Control group: No incentive:	· Tote bag increases response rates with respect to control group · Monetary incentive increases response rate with respect to tote bag
Experimental	British Social Attitudes Survey	NatCen	2023	· Experimental group: £15 (conditional) · Control group: £10 (conditional)	· Higher incentives associated with higher response rates
Experimental	Active Lives Survey	Ipsos	2021	· Experimental group: Entrance to a prize draw to win a single prize of £1,000, in addition to the usual £5 conditional incentive · Control group: £5 (conditional0	· Higher incentives associated with higher response rates
Experimental	Understanding Society	ISER	Wave 12	· Experimental group: £20 (early-bird) · Control group: £10 (early-bird)	· Offering increases in incentives may have more positive results on response rates and data quality than providing higher incentives from the beginning of the fieldwork
Experimental	Understanding Society Innovation Panel	ISER	Wave 16	· Control group: Love2Shop gift card (usual) · Experimental group: Online e-voucher	· Survey participation was higher among those who were offered the standard gift card, compared to those who were offered e-incentives

The push-to-web mode trial of the Childcare and Early Years Survey of Parents 2019 manipulated three features of the survey (incentives, invitation mailings, and survey length) to gather evidence on the optimal design of the survey in terms of maximising response rates while also providing value for money. Three incentivisation conditions were tested: the first experimental group were offered a £5 conditional voucher, the second group received an unconditional non-monetary incentive (tote bag), and a control group received no incentive. The inclusion of a tote bag in the first mailing increased response rates by 4.4 percentage points, compared to offering no incentive, and the offer of a £5 voucher conditional on survey completion, further increased response rates by 4.9 percentage points, compared to the tote bag.

Similarly, the 2023 version of the British Social Attitudes survey included an experiment where households allocated to a specific version of the questionnaire were offered a £15 shopping voucher upon survey completion, as opposed to the £10 offered to the rest of respondents. The response rate for the £15 incentive group was 3.6 percentage points higher than the response rate for the control group.

Prize draws have been scarcely used in the surveys included in this report. The 2019-20 version of the Active Lives Survey (Ipsos, 2021) included an experiment where some respondents were entered into a prize draw to win a single prize of £1,000 in gift vouchers, in addition to the usual £5 conditional incentive provided by the survey. No significant changes in response rates were found compared to the control group, which were only promised the £5 conditional incentive.

Understanding Society has conducted several experiments on incentives, both on their main survey and the innovation panel. The main survey usually offers £20 conditional incentives to previous-wave non-responders and unconditional incentives to previous-wave responders in the form of gift cards. Those who are invited to complete their survey online are also offered a £10 bonus conditional on completion of their interview in the first five weeks of fieldwork.

Wave 12 of the main survey included an experiment investigating the effect on response rates of changing the value of the early bird incentive (Cabrera-Alvarez and Lynn, 2023a). The sample was randomly allocated to one of two groups: a control group which received the usual £10 incentive, and the experimental group which received a higher incentive (£20). Both incentives were “early bird”, i.e., awarded upon response during a time-limited period. The results show that higher values of the incentive boosted response rates, especially at the end of the fieldwork and for panel members who had received this type of incentive in previous waves and, therefore, perceived the change in value as an increase. In contrast, it had no effect when offered to those who had not previously received the early-bird incentive (in this case, respondents transitioning from CAPI in a previous wave to a web-first sequential mixed-mode design in the current wave). This finding suggests that offering subsequent *increases* in incentives might have more positive results on response rates and data quality, than providing higher incentives from the beginning of the fieldwork for longitudinal surveys.

Finally, Wave 16 of the Understanding Society Innovation Panel (Vine *et al.*, 2024) included an experiment in which adult sample members eligible for unconditional incentive (i.e. previous wave-responders) were randomly allocated at the household level to two groups. One group received a Love2Shop gift-card, as usual, in their advance letter. The second group received an advance letter in which they were invited to go online and claim their unconditional e-voucher. The advance letter included a link to access the e-voucher and a “motivational message”

regarding why e-incentives are better than gift cards. Survey participation was higher among those who were offered the standard gift card, compared to those who were offered e-incentives. This suggests that, in longitudinal surveys, participants may become used to receiving the same form of incentive each wave, and do not like when it is changed.

The results of these experiments broadly align with findings in the academic literature, indicating that, although non-monetary incentives can increase response rates compared to offering no incentive to participants, monetary incentives are generally more effective than non-monetary incentives in increasing survey participation and that unconditional incentives tend to outperform conditional incentives in boosting response rates. The experiments conducted as part of Understanding Society offer further insights into the impact of incentives on response rates in longitudinal surveys. The findings suggest that a higher incentive value increases participation only when respondents perceive the increase. Moreover, participants in longitudinal surveys appear to dislike changes in the delivery mode of their incentives, which can negatively affect response rates.

3.3.6 Survey quality indicators

This section introduces some basic descriptions of survey outcomes, including modes of response (section 3.3.6.1), and response rates (section 3.3.6.2). Where possible, the indicators are summarised and illustrated to provide a general overview of the survey landscape. However, as with the rest of the indicators in this evidence review, the reported survey outcomes vary widely across surveys, making a detailed between-survey comparison unfeasible in practice.

3.3.6.1 Modes of response

Our review focused exclusively on surveys conducted without field interviewers or with low participation in interviewer-administered modes. As a result, self-administered paper questionnaires and online surveys are the predominant methods discussed here. *Table 11* provides a summary of the aggregate proportions of response modes over time in our review. The left-hand side of the table summarises this information for *all* 104 survey instances contained in our review. The right-hand side only includes the 92 mixed-mode instances, in which respondents had the option to choose among more than one response mode options. For surveys spanning multiple calendar years, the "year" indicated in the table refers to the year in which fieldwork was completed. The table includes information about survey instances whose report includes the distribution of responses by response mode. This information is not provided in 14 cases.

Web-based responses were steadily increasing since 2018; however, a sharp increase in the share of web-based responses can be observed around 2021, when COVID-19 restrictions were still in place. However, paper-based responses represent a significant proportion of the total number of responses, especially when considering mixed-mode surveys only. This large proportion of responses is explained by surveys with very large sample sizes in which a high share of respondents prefers to provide paper-based responses, such as the Active Lives Survey (around 200,000 responses on average) and GP Patient Survey (over 850,000 responses).

Table 11. Proportion of responses per year and survey mode

Year	Proportion of responses (All instances)					Proportion of responses (Mixed-mode surveys only)				
	Face-to-face	Paper	Web	Telephone	# instances	Face-to-face	Paper	Web	Telephone	# instances
2018	2%	79%	20%	0%	8	1%	76%	23%	0%	8
2019	1%	76%	23%	0%	9	1%	63%	36%	0%	8
2020	1%	61%	38%	0%	15	0%	53%	47%	1%	13
2021	0%	27%	72%	0%	16	0%	47%	53%	0%	14
2022	0%	14%	86%	0%	23	1%	50%	49%	0%	20
2023-24	1%	46%	53%	0%	18	1%	49%	50%	0%	16
Average	0%	38%	62%	0%	90	1%	60%	39%	0%	79
No info	-	-	-	-	14	-	-	-	-	*13*
Total	**-**	**-**	**-**	**-**	**104**	**-**	**-**	**-**	**-**	**92**

3.3.6.2 Response rates

Although response rates by themselves do not provide information about non-response bias or complete picture about survey quality (Groves and Peytcheva, 2008; Schouten *et al.*, 2009; Maslovskaya *et al.*, 2025), response rates are still the most widely used indicator of survey quality. This is because low response rates can seriously undermine the representativeness of a survey, since with low response rates there is a greater potential for bias" (Stoop *et al.*, 2010). In addition, there is no clear alternative measures which have been commonly agreed and can be computed for all surveys. Accordingly, most of the survey instances reviewed (95%) have a technical report that includes this indicator[6].

Response rates, usually expressed as a percentage, are equal to the number of complete interviews with reporting units divided by the number of eligible reporting units in the sample. Best practice recommends reporting response rates using one of the six definitions recommended by the American Association for Public Opinion Research (The American Association for Public Opinion Research, 2023). These definitions differ in two main aspects: i) how partial interviews are considered and ii) how cases of unknown eligibility are handled. Most surveys reviewed report response rates in which partial responses are excluded from total responses, and the number of people in the sample excludes ineligible units. We only found five survey instances (all belonging to the HMRC Costumer Survey, administered by Verian) whose technical reports explicitly reference an AAPOR definition when reporting response rates. While other surveys use calculations that align with one or more of the definitions provided by AAPOR, their technical reports do not provide detailed clarification on this point. There is a great degree of variability in how response rates are calculated and reported, namely:

- Household-based surveys (i.e., surveys where the sampling frame is a list of addresses) frequently report response rates at the household level. How the number of "complete" households is assessed depends on each survey. There are 64 household-based survey instances in which the within-household selection indicates that "all adults", "everyone in the household", "up to two", "up to three", or "up to four"

[6]The four surveys for which we do not have a response rate available include the NatCen Opinion Panel (no technical report available), the Bike Life Survey/The Walking and Cycling Index (technical report does not include a response rate), the Census Coverage Survey (no technical report available), and the Coronavirus Opinion Survey in Northern Ireland (no technical report available).

participants should be selected in each household. 37 of these instances (58%) explicitly mention that the household is considered "complete" when at least one interview has been completed. This is the case for surveys such as the British Social Attitudes Survey, Understanding Society, and the Health Survey for England. Nine other cases (14%) calculate an individual-level response rate, which requires estimating the number of household residents eligible for response in each household. In the remaining cases (28%), the method to determine the number of complete households is not discussed in the report.

- The definition of a "complete" questionnaire varies across surveys, with most allowing some degree of item non-response, at least in some variables. However, most technical reports do not provide a thorough discussion on the definition of the complete questionnaires or how item non-response is assessed.
- Household eligibility is difficult to assess for self-completion surveys, as addresses are generally not visited as part of the fieldwork process. In 38 out of 106 cases (36%), response rates are calculated with respect to the issued sample, without adjustments for eligibility. Several survey instances (48 out of 106, or 45%) provide an ineligibility rate estimate for their issued samples. This rate is typically based on previous face-to-face surveys that used the same sampling frame, and, for PAF samples, generally varies between 8% and 10% of the issued sample. The PAMCO survey is a special case, as it applies the "knock-to-nudge" technique, whereby non-responding households are visited by fieldwork interviewers who invite residents to participate in the survey (either online or by telephone). In these cases, address eligibility can be directly assessed by these field workers. No information is provided on the method to calculate response rates in 20 instances (18% of the total).
- Some household-based surveys also report individual-level response rates. Calculating an individual-level response rate for surveys using an address-based sampling frame requires estimating the average number of residents (or potential respondents) in non-responding households. An assumption on individual eligibility (i.e., how many of these residents belong to the target population) is also required.
- For longitudinal surveys, the sample design is generally carried out during the first wave. In subsequent waves, the issued sample excludes households that have dropped out of the study, either due to refusal, continuous non-participation, or moving to an unknown location. For these surveys, the denominator of the response rates can either consider only those households issued in the present wave, or all the households originally issued during the first wave. Technical reports of longitudinal surveys usually include response rates based on the sample issued in the present wave.
- Individual-based surveys (i.e., surveys where the sampling frame is a list of individuals) frequently report response rates based on the issued sample. As these are named sampling frames, ineligibility is generally limited to individuals who have died or left the country since the sample was issued. For surveys whose sampling frame is the list of respondents of another survey (for example, the National Travel Attitudes Survey, which uses the list of respondents to the National Travel Survey as its sampling frame), ineligible sample members include those individuals who did not provide consent to be re-contacted.

Variations in calculation methods are not the only factor complicating the assessment of response rates across surveys. Response rates are also highly context-dependent, influenced by factors such as topic relevance, data collection methods (especially communications and

incentives), questionnaire length, timing, and frequency. Furthermore, many of the technical reports reviewed lack a detailed discussion of the methods and assumptions used to calculate response rates, making it challenging to evaluate their validity and appropriateness. Considering this, we decided to summarise the obtained response rates considering four survey categories, for which markedly different response rate values could be observed:

(1) *Household-based, cross-sectional, general population surveys*. This group includes 58 instances, which represent 58% of the survey instances that provide information about response rates. Response rates in this group vary between 5% and 38%. Around 83% of surveys in this group have response rates between 10% and 30%. The histogram in Figure 7 illustrates the distribution of response rates for household-based, cross-sectional, general population surveys. In general terms, these response rates are household-based, meaning that a household is counted as "complete" if at least one complete interview is achieved, even if response was required for more than one adult.

(2) *Household-based longitudinal surveys.* This group includes 17 survey instances. As previously discussed, response rates in this group were calculated with respect to the issued sample, which generally implies higher expected response rates compared with cross-sectional surveys. Response rates in this group vary between 32% and 70%, with around 83% of the surveys exhibiting response rates between 60% and 70%. The histogram in Figure 8 depicts the distribution of response rates in this group.

(3) *Individual-based, cross-sectional surveys of new participants*. This group includes 17 survey instances, with response rates varying between 15% and 74%. Surveys belonging to this group use informative sampling frames, which allow for targeted contact and recruitment strategies. 35% of surveys in this group have response rates between 30% and 50%. The distribution of response rates in this group is illustrated in Figure 9.

(4) *Individual-based, cross-sectional surveys of previous participants*. This group includes 13 survey instances. These surveys use a "piggybacking" approach, in which respondents from previous survey who have provided consent, are re-contacted to respond to another survey (for example, the National Travel Attitudes Survey, or the Inpatient Experience Survey). Response rates in this group are generally higher than in other cross-sectional surveys and vary from 36% to 78%. 69% of the surveys in this group have response rates between 30% and 50%. Figure 10 depicts the distribution of response rates in this group.

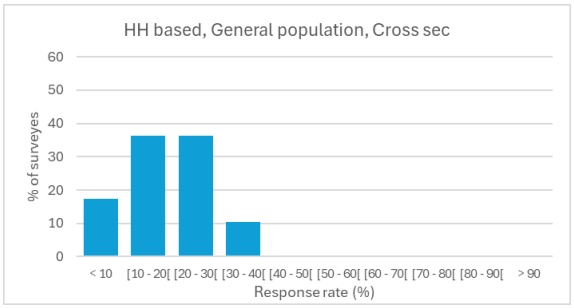

Figure 7. Response rates – (1): Household-based general population surveys

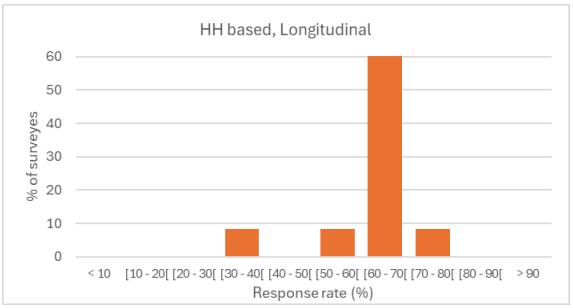

Figure 8. Response rates – (2): Longitudinal surveys

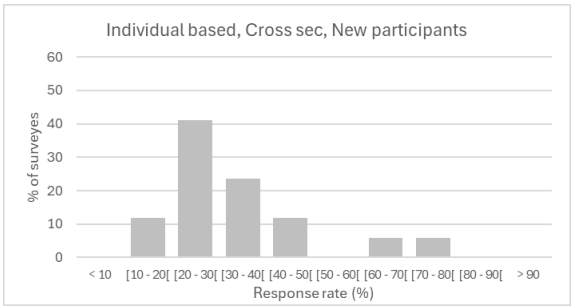

Figure 9. Response rates – (3): Individual-based general population surveys

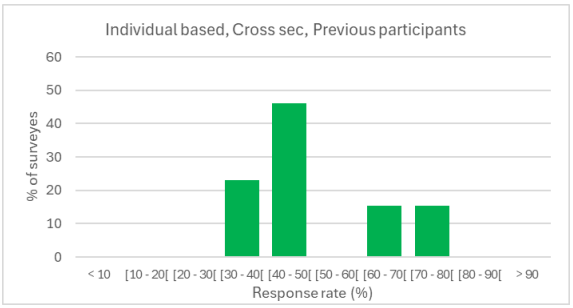

Figure 10. Response rates – (4): Individual-based surveys of previous participants

Finally, Figure 11 illustrates the variability of response rates per survey type (considering these four groups) and year.

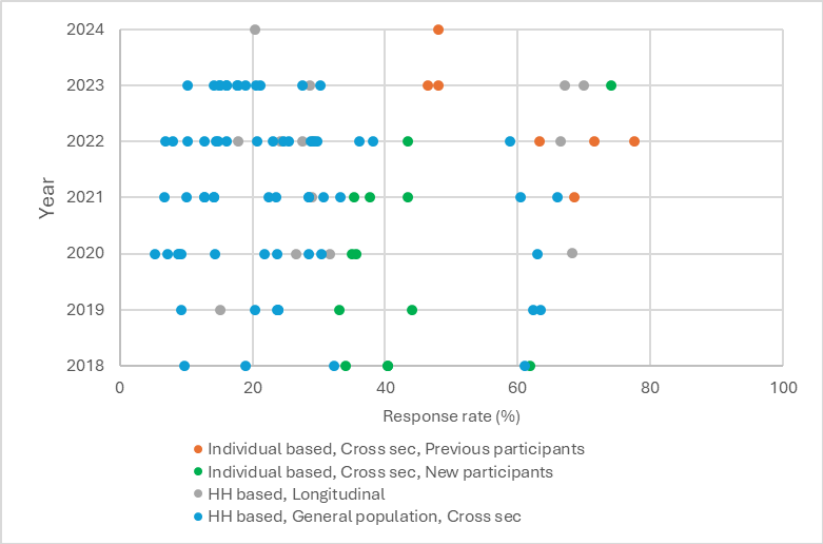

Figure 11. Response rates per year, survey instance, and survey type

A great deal of variability can be observed in the range of response rates reported by surveys in each group. As previously mentioned, inter-survey variability could be explained by factors related to survey design (including target population, topic relevance, questionnaire length), the contact and recruitment strategies (contact and response mode, communication strategy, incentivisation strategy). The nature of who is required to respond is also likely to be

important, as surveys requesting a response from “any adult” in the household can be easier to fulfil than a randomly selected or predefined adult, which in turn is easier to achieve than “all adults” in the household.

Time appears to be the main source of intra-survey variability in response rates, as close inspection of repeated instances of surveys reveals a general trend towards lower response rates over time. Mode changes could also explain part of this intra-survey variability in response rates. Surveys like the British Social Attitudes survey or the National Survey for Wales (not analysed in this report) have reported response rate decreases that can be associated with the surveys moving from face-to-face interviewing to self-administered modes.

However, when examining surveys without significant changes in administration mode, not all response rates show a consistent decline over time. While declining trends are evident in several surveys, others show slightly improving response rates in recent years. This suggests that declining response rates are not unavoidable and could be mitigated with effective design and recruitment practices.

3.4 Summary of findings

In this document, we review the methods deployed by self-completion surveys conducted in the UK during the last five years. The review is based on technical reports of 106 instances of 45 surveys, supplemented by reports, survey materials and information provided by UK survey agencies, and is focused on contact and recruitment practices.

Our descriptive findings can be summarised as follows:

- The surveys reviewed include address-based cross-sectional and longitudinal surveys, as well as individual-based surveys with individual-level sampling frames
- Over two-thirds of the survey instances reviewed were mixed-mode surveys, with response modes offered sequentially in 63% of these cases.
- Although our review excluded face-to-face-only-administered surveys, approximately 15% of the surveys still included face-to-face interviewing as a response option within their mixed-mode strategy.
- Completely self-administered surveys (i.e., those without any form of interviewer involvement) accounted for about 71% of the survey instances.
- The most common strategy involved contact via post, consisting of an initial mailing followed by two reminders (41% of survey instances), while three reminders were used in 31% of instances.
- Eighty-two percent of survey reports indicate that the surveys include an incentive. In most cases (75%), only conditional incentives are used, while 5% employ a combination of conditional and unconditional incentives.
- Response rates vary significantly across surveys, with the lowest rates observed in household-based general population surveys and the highest in individual-based surveys with sampling frames derived from previous survey participants.

In addition to these descriptive findings, several surveys include reports on experiments conducted as part of their data collection processes. These experiments play a crucial role in improving response rates, sample representativeness, and data quality, while also managing survey costs. Furthermore, they make a significant contribution to the field of survey

methodology by providing empirical evidence on the effectiveness of various contact and recruitment strategies.

Findings from these experiments indicate that:

- Higher monetary-value incentives are generally associated with improved response rates.
- Differential incentives show potential as an effective approach to enhancing overall response rates while ensuring better representation of hard-to-recruit population subgroups in the sample.
- In mixed-mode survey designs, contacting participants through alternative methods (such as text messages and emails when feasible) and providing additional ways to access the survey questionnaire, such as QR codes, may be associated with increased response rates. Notably, these approaches can also contribute to a higher proportion of online responses, which can positively impact fieldwork costs.
- Experiments involving changes to mailing characteristics (such as appearance, design, logos, and contents) tend to be less effective at improving response rates. However, some interventions successfully reduced survey costs and were adopted so long as they did not negatively affect response rates.

The UK survey landscape is undergoing a transition toward self-administration, with several major large-scale surveys moving in this direction. Although declining response rates remain a significant challenge, agencies are actively testing various strategies to improve participation. These include innovative contact methods, targeted approaches for recruiting hard-to-reach subgroups, alternative options for questionnaire access and survey response, and the use of differential incentives. It is crucial to evaluate whether these methods can ensure that self-administered surveys remain reliable in terms of sample representativeness and data quality, and the measures that need to be implemented to improve response rates.

4 General summary

The use of online and self-administered surveys has grown significantly in recent years, often surpassing traditional data collection methods. Compared to face-to-face surveys, self-administered surveys offer key advantages, including lower fieldwork costs and faster data collection. However, achieving high response rates and representative samples in web-based or mixed-mode surveys requires careful attention to survey design. In this document, we have reviewed the academic literature on recruitment practices for self-administered surveys, summarising the key factors that influence response rates and sample representativeness. We have also examined self-administered social surveys conducted by UK agencies, analysing their design choices and their potential associations with response rates. In this section, we bring the findings from literature review and survey practice review together and highlight how current survey practices align with evidence-based best practices in the field.

4.1 Pre-notifications: A mixed picture

In relation to communication strategies, there is ongoing debate about whether prenotifications are a cost-effective or relevant intervention in self-completion surveys. Evidence from the literature review suggested that prenotifications were more effective than no prenotification in both web and mail surveys, with a particularly strong impact among older respondents in mail surveys. An experiment found that the effectiveness of using a prenotification letter instead of a second reminder was inconclusive, although this indicated that it is the extra mailing that is effective rather than the type of mailing and with limited resources, use of a prenotice in self-completion surveys may not be a cost-effective strategy. Our evidence review did not find any examples of UK surveys posting pre-notification letters before the initial invitation letter. In practice, the proactive mailing of paper questionnaires with the prenotification letter was less common, although over two thirds of the reviewed surveys offered paper questionnaires, either with one of the reminder letters, or as an option to be requested by calling a helpline

4.2 Optimal communication strategy: two or three reminders may be sufficient

The literature review suggests that two or three reminders may be the optimal communication strategy. Two reminders yielded significantly greater benefit compared to just one, while no notable difference in response rates was observed between strategies using two reminders and those using three or more reminders. Although some studies found statistically significant improvements with additional reminders, the magnitudes of the effects were generally small. Fieldwork procedures varied substantially across surveys in terms of the number and frequency of reminders, with most surveys sending two or three reminders to respondents.

4.3 The advantage of shorter reminder intervals

Considering the intervals between reminders, evidence from both the literature and survey practice reviews indicated that strategies with shorter intervals between reminders were more effective in increasing response rates than those with longer intervals. In the literature shorter intervals were considered to range between 1.5 to 3 weeks, with longer intervals ranging from 3 to 6 weeks. Furthermore, sample members receiving an invitation on a Friday were significantly more likely to access and begin the survey than those receiving the

invitation on a Monday. In practice, concurrent mixed-mode surveys frequently dispatched reminders after seven or ten days, while for sequential mixed-mode surveys, the first reminder was typically sent two weeks after the initial invitation.

4.4 Effective invitation letters: Building trust over personal appeal

The literature on the content of invitation and reminder letters was largely theoretical, with only one experimental study directly comparing communication approaches based on social exchange theory and pre-suasion theory. Findings suggested that messages in the letters grounded in pre-suasion theory – which appealed to a personal connection – were less effective than those based on social exchange theory. The latter approach emphasised trust by highlighting the legitimacy of the sponsoring organisation and underscoring the benefits of participation while minimising the burden on respondents. Notably, this approach was also the most common among surveys examined in the survey practice review.

Furthermore, from the survey practice review most letters could not be fully personalised due to limitations of the address-based sampling frame, which provides limited information. However, there is substantial variation in how personalisation can be operationalised. Evidence from the literature suggested that personal touches – such as handwritten signatures or address labels – were more effective in boosting response rates than printed or scanned equivalents.

4.5 Logo effectiveness: Context and credibility matter

In the survey practice review, all letters included logos representing either the organisation conducting the survey or, more commonly, the commissioning body. While experimental evidence on this topic remains limited, some findings emerged. For instance, including a government logo alongside the survey logo significantly boosted response rates when recruiting new participants for a longitudinal survey – possibly because participants were unfamiliar with the survey itself. However, government logos proved ineffective for increasing response in cross-sectional surveys. Similarly, evidence from the literature suggested that university logos tended to be more effective than either government or commercial logos in eliciting responses.

4.6 The limited impact of survey materials

Findings on the effects of materials used were consistent across both the literature and the survey practice reviews, and overall, these materials had a limited impact on response rates. The use of standard-sized and larger non-standard-sized envelopes showed no significant effect on response. While brown envelopes appeared slightly more successful than white ones in encouraging recipients to access and begin the survey, the difference was not statistically significant. However, envelopes featuring a front window that displayed the cash incentive were more effective at recruiting respondents than windowless envelopes. Among windowed envelopes, those with smaller windows outperformed envelopes with larger windows.

4.7 The prevalence and flexibility of web access

Evidence from the survey practice review indicated that web questionnaire access was the most frequent method in UK self-completion surveys – indeed, it was included in all surveys reviewed. It was typically provided alongside options to request a paper questionnaire or opt-

in for telephone completion. URLs were the predominant means of web access, while QR codes were used only sparingly. This was consistent with evidence from the literature, which suggested that offering respondents multiple ways to access the questionnaire could improve response rates. Although still nascent, the use of QR codes has increased with technological advances, and evidence indicates that they may offer a more cost-effective and operationally simpler alternative to URLs.

4.8 Sequential vs. concurrent designs: Boosting web response

Experimental evidence from the survey practice review indicated that offering different mode options did not significantly affect overall response rates. This finding aligned with evidence from the literature, which also reported inconclusive differences in response rates when comparing sequential and concurrent mixed-mode designs. However, both the literature and the survey practice review provided consistent evidence that sequential push-to-web designs resulted in higher proportions of web responses than concurrent designs. Additionally, the literature suggested that sequential web–mail approaches tended to have a lower cost per response compared to concurrent web or mail designs. These findings support the view that sequential designs – beginning with a web mode and reserving more expensive modes, such as paper questionnaires, for follow-up with non-respondents – may offer greater cost efficiency.

4.9 Incentives improve response rates and sample representativeness

Considering incentives, evidence from the survey practice review found that while some UK surveys did not offer incentives, the vast majority did include some form of incentive. Findings from the literature and experiments from survey practice consistently showed that offering an incentive increased the likelihood of response and improved sample representativeness by encouraging participation among individuals with lower response propensities. Among the surveys reviewed, conditional incentives were more commonly used than unconditional ones. This preference may be influenced by budget constraints, especially for large-scale surveys, and by evidence suggesting that conditional incentives are more cost-effective. However, unconditional incentives have been shown to be more effective at boosting recruitment and response rates

4.10 Monetary incentives: Effective, but an optimal amount is unclear

In terms of incentive type, monetary incentives (provided in the form of vouchers) were more common among UK surveys. This aligns with evidence from the literature, which indicated that monetary incentives were generally more effective at increasing response rates than non-monetary ones, even when the monetary value was relatively lower. Among UK surveys, the most common incentive value was £10, which was consistent with findings from literature that £5 or £10 were typical incentive amounts. While evidence suggested that larger incentives tended to increase response rates, there was no evidence of a clear correlation between incentive value and response rate. Rather, evidence suggested that there were diminishing returns, and in the UK context, it remained unclear what the optimal amount of incentive was.

4.11 Differential incentives can improve participation in certain sub-groups

In both the literature and practice, differential incentives and variations in the delivery of incentives were used in attempts to find effective and cost-efficient ways to encourage survey participation. Targeted incentives for low-propensity response groups proved effective in recruiting hard-to-engage population subgroups and reducing non-response biases. Early-bird incentives, designed to encourage web questionnaire completions and early participation before reminders were sent out, also effectively persuaded participants to complete web questionnaires. Strategies that combined conditional and unconditional incentives were found to be more effective than using either approach alone. Distributing incentives by front-loading a small portion and reserving a larger amount for completion boosted initial participation and encouraged follow-through. Visible cash incentives in mailing were found to be effective, while small-guaranteed gift cards performed better than prize draws, regardless of whether the payouts were high or low. In general, incentive delivery methods that reduced the burden on respondents to redeem the incentive proved more effective.

4.12 Reporting response rates

Finally, a notable contrast between the evidence from the literature and the survey practice reviews was that, in most cases, response rates reported in the literature were based on one of the six AAPOR-defined response rate formulas endorsed by the international survey research community. In contrast, UK surveys showed significant variability in how response rates were calculated and reported. Although some aligned with AAPOR definitions, this alignment was not made explicit in the vast majority of surveys.

4.13 The gap between theoretical guidelines and survey practices

Research on self-administered surveys consistently provides recommendations for improving response rates and survey quality, focusing on key aspects such as mixed-mode designs, communication strategies, survey materials, and incentivisation. While UK survey practitioners generally adhere to these evidence-based guidelines, real-world implementation often encounters practical challenges, including budget constraints and tight timelines. This gap between theoretical best practices and operational realities highlights the need for recruitment strategies that strike a balance between methodological rigour and fieldwork feasibility.

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Appendices

Appendix A: List of included surveys with references to technical reports

The following table contains the full list of surveys included in our analysis of UK survey practice, along with the references to the technical reports from which their information was obtained.

Agency Abbrev.	Code	Name	References	# Instances	Period
CLS	CLS05	Cross-cohort COVID-19 Web surveys	Brown *et al.* (2021)	3	2020–2021
	CLS06	COVID Social Mobility and Opportunities Study	Bolling *et al.* (2023) Hamlyn *et al.* (2023)	2	2022–2023
Ipsos	IPS01	Active Lives Survey	Ipsos (2019) Ipsos (2020) Ipsos (2021) Ipsos (2022a) Ipsos (2023a)	5	2020–2022
	IPS02	Food and You 2	Candy *et al.* (2020) Candy *et al.* (2021) Peto *et al.* (2021) Gallop *et al.* (2022) Horton *et al.* (2023) Deepchand *et al.* (2023a) Deepchand *et al.* (2023b)	7	2020–2022
	IPS03	REal-time Assessment of Community Transmission	Elliott *et al.* (2023) Riley *et al.* (2021)	2	2021–2022
	IPS04	GP Patient Survey	Ipsos (2018) Ipsos (n/d-a) Ipsos (n/d-b) Ipsos (n/d-c) Ipsos (n/d-d) Ipsos (n/d-e)	6	2019–2023
	IPS05	PAMCo–Audience Measurement for Publishers	Ipsos (2022c) Ipsos (2023b) Ipsos (2024)	3	2021–2023
	IPS06	Northern Ireland Life and Times Survey	NILT (2023b) NILT (2023a) NILT (n/d) NILT (2024)	4	2020–2023
	IPS07	My Life in the Highlands and Islands	Ipsos (2022b)	1	2022
	IPS08	Childcare and early years survey of parents 2019: push-to-web trial	Huskinson *et al.* (2019)	1	2019
ISER	USS01	Understanding Society	Carpenter (2019) Carpenter (2020) Carpenter (2021) Carpenter (2022) Kantar Public and National Centre for Social Research (NatCen) (2023a) Kantar Public and National Centre for Social Research (NatCen) (2024)	6	2018–2023
	USS03	Understanding Society [Innovation Panel]	Hanson *et al.* (2018) Kantar Public and National Centre for Social Research (NatCen) (2020) Kantar Public and National Centre for Social Research (NatCen) (2021) Kantar Public and National Centre for Social Research (NatCen) (2022) Kantar Public and National Centre for Social Research (NatCen) (2023b)	5	2018–2023

Agency Abbrev.	Code	Name	References	# Instances	Period
NatCen	NAT05	Survey for Londoners	Cornick *et al.* (2019) Cant *et al.* (2022)	2	2020–2021
	NAT08	British Social Attitudes	Clery *et al.* (2021) National Centre for Social Research (NatCen) (n/d-a) National Centre for Social Research (NatCen) (n/d-b) National Centre for Social Research (NatCen) (n/d-c)	4	2020–2022
	NAT09	Bike Life Survey/The Walking and Cycling Index	Fearnyough *et al.* (2020) Cessford *et al.* (2022) Cessford *et al.* (2024)	3	2019–2023
	NAT10	Financial Lives Survey	Financial Conduct Authority (2021) Financial Conduct Authority (n/d)	2	2020–2022
	NAT11	Public Confidence in Official Statistics	Butt *et al.* (2022) National Centre for Social Research (NatCen) (2024)	2	2021–2023
	NAT12	Generations and Gender Survey	Howe *et al.* (n/d)	2	2023–2023
	NAT13	Gambling Survey for Great Britain	Gambling Commission (2024b)	1	2023–2023
	NAT14	Gambling Participation and the Prevalence of Problem Gambling–Experimental Statistics	Gambling Commission (2024a)	2	2023
	NAT15	The Health Survey for England 2020/2021 Feasibility study	NHS England (2021)	1	2022–2022
	NAT16	Adult Oral Health Survey 2019	Office for Health Improvement & Disparities (2023)	1	2019
	NAT18	National Travel Attitudes Study	National Centre for Social Research (NatCen) (n/d-d)	1	2019
ONS	ONS06	Opinions and Lifestyle Survey	Office for National Statistics (2024b)	3	2021–2023
	ONS12	Winter Coronavirus Infection Study	Office for National Statistics (2024a)	1	2024
	ONS13	Census 2021	Office for National Statistics (2022c)	1	2021
	ONS15	Census Coverage Survey	Office for National Statistics (2022a)	1	2021
	ONS16	Coronavirus (COVID-19) Infection Survey	Office for National Statistics (2023)	2	2021–2022
	ONS17	Trust in Government Survey	Office for National Statistics (2024c)	2	2022–2023
	ONS21	Over 50s Lifestyle Study	Office for National Statistics (2022b)	1	2022
	ONS22	Coronavirus (COVID-19) Infection Survey [Northern Ireland]	Office for National Statistics (2023)	2	2021–2022
ScotGov	SCO01	Health and Care Experience	NHS Scotland (2020) NHS Scotland (2022) NHS Scotland (2024)	3	2020–2024
	SCO02	Scottish Cancer Patient Experience Survey	NHS Scotland and Macmillan Cancer Support (2019)	1	2018
	SCO03	Maternity Care Survey	NHS Scotland (2019)	1	2018
	SCO04	Inpatient Experience Survey	NHS Scotland (2018)	1	2018
Verian	VER01	Community Life Survey	Kantar Public and Department for Digital Culture Media & Sport (2019a) Kantar Public and Department for Digital Culture Media & Sport (2020) Kantar Public and Department for Digital Culture Media & Sport (2021) Kantar Public and Department for Digital Culture Media & Sport (2023)	4	2020–2022
	VER02	Participation Survey	Kantar Public and Department for Digital Culture Media & Sport (2019b)	1	2022
	VER03	Individuals, Small Business and Agents Customer Survey	HM Revenue & Customs (2019) HM Revenue & Customs (2020) HM Revenue & Customs (2021) HM Revenue & Customs (2022) HM Revenue & Customs (2023)	5	2018–2022

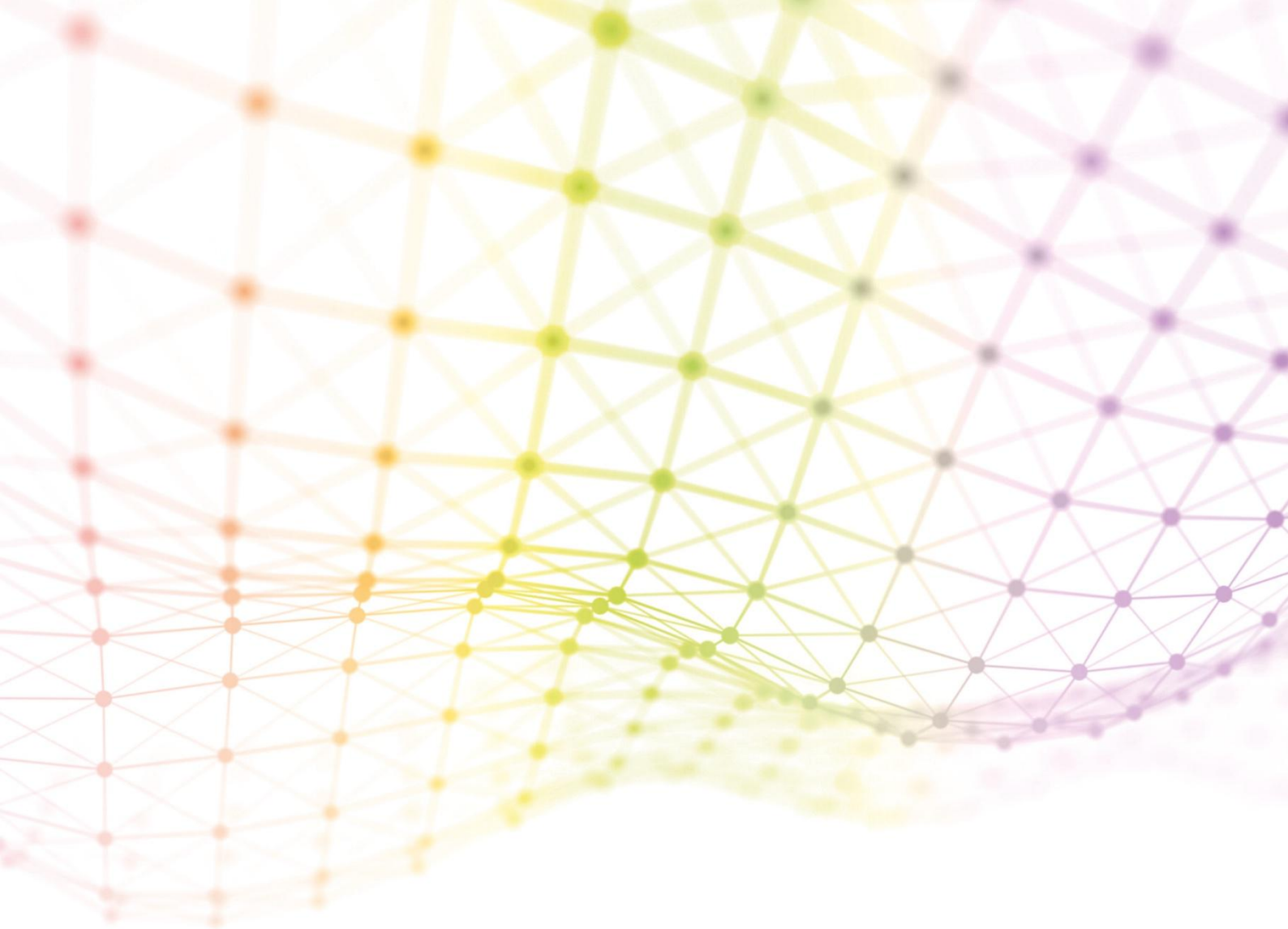
Agency Abbrev.	Code	Name	References	# Instances	Period
	VER04	Survey on Attitudes to the Environment	Department for Environmental & Rural Affairs and Kantar Public (2023)	1	2022
	VER06	DENZ/BEIS Public Attitudes Tracker	Department for Business Energy and Industrial Strategy (BEIS) (2023)	2	2022–2023
	VER07	High Street Action Zones Survey	Historic England and Kantar Public (2021)	1	2021
	VER08	Empowering Places	Williams *et al.* (2023)	1	2023
	VER09	Public Voice Recruitment Survey	Kantar Public (2022)	3	2020–2021
	VER10	Attitudes to Mental Illness	(Kantar Public, 2023)	1	2023
Total number of instances				**147**	**2018–2024**

Appendix B: List of indicators

The following table lists the indicators used for the analysis of UK survey practice.

Dimension	Sub-dimension	Indicator
Characteristics	General characteristics	Agency
		Survey code
		Instance
		Survey name
		Survey instance/Abbreviation
		Commissioner(s)
		Organisation(s)
		Report quality
		Topics
		Year(s)
		Periodicity
		Country
		Target population
		Sampling frame
		Survey design
		Sampling type
		Sampling method
		Population subgroups
		Targeted procedures
		Within-household selection
		Fieldwork
		Experiments
		Experiments - Notes
		Communication strategy
		Number of questions
		Median completion time
		Mean completion time
Mode design	Contact mode	Mail
		Email
		Telephone
		Face-to-face
	Response mode	Mode
		Paper
		Web
		Telephone
		Face-to-face
		Number of reminders
Incentives	Presence	Presence/Absence
	Timing	Unconditional
		Conditional
	Type	Monetary

Dimension	Sub-dimension	Indicator
		Non-monetary
		Type of monetary
		Type of non-monetary
	Amount	Amount
	Variation	Variation
Outcomes	Response rates	Response rates - HH
		Response rates - individual
		Achieved sample size - HH
		Achieved sample size - ind
	Proportion by response mode	Paper
		Web
		Phone
		Face-to-face
	Others	Sample composition
		Accuracy of selection
		Attrition
Communications	Survey characteristics	Survey code
		Instance ID
		Survey name
		Survey instance/Abbreviation
		Type
		Communication ID
		Available?
		Who receives it
	Communication mode	Mail
		Mail - Colour
		Mail - Logo
		Mail - Size
		Email
		Email - Subject line
		Telephone/SMS
		Face-to-face
		Other
	Communication timing	Day(s) of the week
		Hour(s) of the day
	Communication engagement	Personalisation
		Imagery or plain text
		Grammar and formatting
	Communication access	Font size
		Others
	Communication practical info	Sensitive information
		Subsequent follow-up
		Feeding back any results
		Voluntary participation
		Deadline
		Survey length
		Additional information/leaflets
		Help available for participants
		Language
		Sponsor/Sender information
		Incentives mentioned
	Questionnaire access method	Paper
		Web - Login details
		Web - QR codes
		Phone



University of Essex

University of Southampton

UKRI Economic and Social Research Council

NCRM National Centre for Research Methods

Office for National Statistics

UCL

Warwick The University of Warwick

Manchester 1824 The University of Manchester

City University of London Est 1894

National Centre for Social Research

LSE The London School of Economics and Political Science

Ulster University

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