

Reducing Respondent Burden with Efficient Survey Invitation Design

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Increasing costs of data collection and the issue of non-response in social surveys has led to a proliferation of mixed-mode and self-administered web surveys. In this context, understanding how the design and content of survey invitations influences propensities to participate could prove beneficial to survey organisations. Reducing respondent burden with efficient invitation design may increase the number of early responders, the number of overall responses and reduce non-response bias. This study implemented a randomised experiment where two design features thought to be associated with respondent burden were randomly manipulated: the length of the text and the location of the survey invitation link. The experiment was carried out in a sequential mixed-mode survey among young adults (18-35-year-old) in Iceland. Results show that participants were more likely to participate in the initial web survey when they receive shorter survey invitation letters and when the survey link is in the middle of the letter, although further contacts by other modes mitigate these differences for the full survey results. Additionally, short letters with links in the middle perform well compared to other letter types in terms of non-response bias and mean squared error for those characteristics available in the National Register.

Keywords: Survey invitations, Non-response, Data collection, Mixed-mode, Invitation letters

1 Introduction

Survey invitations represent the first stage in the communication process between the survey organisation and respondents, a process that ideally ends with survey participation. Studying the design of effective invitations should therefore be a priority for survey organisations that wish to increase response rates and reach a more representative sample at relatively low costs. Efficient design is important regardless of the type of survey being carried out. However, it becomes essential when conducting a one-off self-administered web survey where there is no pre-existing relationship between respondents and the survey organisation. Invitations are used in all surveys, but the proliferation of web surveys and push-to-web mixed-mode surveys requires a renewed focus on finding empirically validated advice on designing survey invitation letters intended to induce web participation (Dillman, 2017).

Many design features must be considered, including ap-

pearance and content, as well as writing it in a manner that reduces burden and is conducive to survey participation. At some stage in the process, recipients must also be provided with the information needed to allow for informed consent for participation. The inherent tension in choosing the content of survey invitations is to balance the need to provide enough information to the recipient and the desire to limit the burden it places upon the reader. Therefore, combining all pieces of information that have been shown to boost participation does not necessarily lead to higher participation rates, as their combined effect may be an increase in respondent burden. Designers must also find an effective ordering and structure of the information presented. The location of instructions regarding how to participate in the survey is particularly important, as that is the essential piece of information leading to the desired outcome – survey participation. The interaction between those design features, length, and participation instructions, may also matter if their combined effects further decrease participation rates. It is therefore necessary to examine whether there is an upper limit to the amount of information we can place in a survey invitation letter and where to place participation instructions.

In this study, we investigate which design features of the initial communications, mailed survey invitation and re-

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reminder letters, facilitate participation, and minimize non-response bias in a mixed-mode web-first survey. A sequential data collection protocol was used to test the effectiveness of mailed survey letters among young people (18–35-year-old) in Iceland. The effects of two treatments were tested using a 2×2 factorial experimental design, creating four experimental groups based on combinations of these treatments. The experimental treatments were the length of the text and the location of the web survey link. We study how these treatments affect propensities to respond to the survey at different stages of data collection. The effects of different letter versions are studied upon receiving the initial survey invitation letter, again after a reminder letter has been sent and finally for the full survey results where telephone contacts and email reminders have been used. While our analysis focuses on the effects of the letters on participation in the initial web survey, we also consider if they impact subsequent cooperation under a different mode.

2 Background

2.1 Respondent burden

An important aspect of designing communications used to invite recipients to participate in self-administered web surveys is the burden they place upon the reader. Respondent burden, a concept that describes the negative consequences of carrying out difficult activities when responding to a survey, can manifest itself in several ways, e.g. when surveys are too long, unappealing to the respondent or questions are difficult to understand (Bradburn, 1979; Lynn, 2008; Sharp & Frankel, 1983). Respondent burden is a well-researched topic in the academic literature in terms of how it affects survey behaviour. However, more research is needed to explore whether the concept can be applied to survey invitations.

Making survey invitations concise and easy to understand and navigate may constitute good survey practice, but more empirical evidence is needed. How do the length of the invitation letter and the location of participation instructions affect respondent burden? Human memory is limited, and when learning new information only a few pieces of information can be kept in working memory (Baddeley, 1992). Cognitive load theory offers insights on how carefully crafted instructions can achieve the intended goal by reducing the amount of information held in working memory and by focusing attention on specific pieces of information (Sweller, 1988; Sweller et al., 2011). It therefore stands to reason that respondent burden can be increased by including too much information or information that is not relevant in the invitation letter. However, shortening the text must be done with care, as failing to provide key information may confuse the recipient, potentially causing nonresponse.

While reducing burden is a worthwhile goal, it is clearly not the only goal that must be fulfilled when designing survey

invitations. Survey organisations have a duty to guarantee the protection of respondents' data and to get their informed consent before they respond to the survey. Similarly, design features and information that have been shown to be helpful for inducing participation should be included (Dillman, Smyth, & Christian, 2014), but including all positives may have the combined effect of increasing burden. One of the most popular theories on how to induce survey participation is leverage-saliency theory, which states that survey design attributes have different leverages and the saliency of these attributes in conjunction with people's characteristics determine their propensity to cooperate in the survey. Leverages (e.g. topic, incentives, relationships with the survey sponsor) can either facilitate cooperation or not, depending on the relevance of the attribute in question to the respondent. Saliency reflects how much emphasis the survey organisation places on a specific attribute, e.g. if an interviewer stresses the topic more than the incentives or vice versa. These features can increase or reduce survey participation rates, and they interact with the respondent's characteristics (Groves, Singer, & Corning, 2000). Letters and emails do not provide an opportunity to make different features more salient based on recipient characteristics unless targeted contacts are used (Lynn, 2014, 2017). This poses a challenge to survey researchers, as they must make decisions regarding which features to make salient in advance for the entire sample. One recommendation in such situations is that the approach should be "tailored" to fit the survey topic and sample for each survey (Dillman et al., 2014). If design features of survey invitations affect participation rates due to an increase in respondent burden, survey researchers can weigh those leverages against making certain points more salient in the invitation text.

As well as informing the recipient and inducing survey participation, survey invitations should also aim to decrease non-response bias by appealing to groups with lower participation propensities. Limiting non-response bias may be achieved by a variety of methods, or combinations of methods. These include monitoring the data collection process to exert greater effort in reaching specific units, using adaptive (Schouten, Peytchev, & Wagner, 2017) or responsive (Groves & Heeringa, 2006) survey designs, stopping rules (Tourangeau, Michael Brick, Lohr, & Li, 2017), or targeting (Lynn, 2017), where known characteristics about sample units are used to vary the contact protocol. However, the most desirable way to reduce non-response bias is to increase the number of responses gathered specifically among the groups that are hard to reach. Facilitating participation among low propensity respondents should therefore be a key objective when designing survey invitations.

2.2 Survey invitations as the first step in a multi-stage participation process

Participation in self-administered web surveys is a multi-stage process. This contrasts with interviewer administered surveys which generally follow strict protocols and interviews are often completed in a single session. In ‘push-to-web’ designs, mailed invitations to web surveys rely on the recipient’s interpretation of the material and instructions (Dillman, 2017). They have distinct phases, each of which may lead to a non-response. If the letter is received by its intended recipient, several decisions must be made before answering the survey. These include deciding whether to engage with the letter by reading it and starting the survey process. Even so, the mode switch – from reading a letter to entering the relevant information in a web-based device – may be too burdensome (Crawford, Couper, & Lamias, 2001). Additionally, even an interesting survey request may be postponed and subsequently forgotten. Therefore, survey invitation letters should be accessible, engaging, and they should induce participation as soon as possible. The effectiveness of different types of survey communication has been studied in many contexts. Perhaps the most widely used advice on the design of survey invitation letters is found in (Dillman et al., 2014). The overall design of invitation letters “. . . [needs] to communicate in a brief and engaging way what people were being asked to do, why they were being asked to do it, how they should do it, and what benefit would come from it, within only one page of text.” While these recommendations concur with the theory that burden should be reduced, they do not appear to have been empirically verified.

Web surveys and web-first mixed-mode surveys present a new challenge for designing survey invitation letters, but prior knowledge from other survey modes can prove helpful. In particular, a rich literature exists on the effects of prenotification letters and reminder letters, which have been associated with higher response rates in many types of surveys (Christensen et al., 2015; Fox, Crask, & Kim, 1988; Leeuw, Callegaro, Hox, Korendijk, & Lensvelt-Mulders, 2007). For example, Lynn, Turner, and Smith (1998) experimented with advance letters of varying complexity (word count, average word and sentence length) and formality (e.g. using the first-person singular vs plural, and the placement of contact information). While they did not find significant results from the treatments on their own, their combined effect increased response rates for simple and informal letters. The experiment also found that compared to not receiving a letter, advance letters did not increase response rates, but did reduce the number of visits needed for an interview. Other research has found that the design of survey contacts can alter the composition of the responding sample, e.g. by showing images related to the survey topic (Liu, Kuriakose, Cohen, & Cho, 2016). So, while some recommendations on designing survey invitation letters exist in the literature, a gap exists with

regards to empirical proof that reducing the burden of postal invitations affects response propensities for web or push-to-web surveys.

In addition to the visual aspects of letters, the content of survey communications (e.g. introducing the survey, instructions on participating, motivation, information regarding the survey goals, and the survey organisation, how the results are used, privacy and contact information), can be varied in order to find texts that induce participation. One such feature is the framing of the survey request, which is important to some, but not all, participants (Lynn, 2019). Petrovčič, Petrič, and Lozar Manfreda (2016) looked at framing the survey request within an online community and found that a “plea for help” framing worked better than “presence of authority” and “appeal to community” framings. Gendall, Hoek, and Esslemont (1995) tested several ways of communicating the survey request for a mail survey and found that altruistic appeals boosted response rates, but not the complexity and tone of the letters. Targeting is another exciting possibility when detailed sample frames or paradata are available. It has been successfully leveraged in some instances to raise response rates, e.g. by using information from previous waves in panel surveys to tailor the message to specific groups within the sample (Lynn, 2016). In another experiment the themes of cover letters were varied and found to affect response rates. However, the groups that received letters with no themes mentioned responded at higher rates than those who did (Christensen, Lynn, & Tolstrup, 2019), raising questions about the benefit of extending the length of the letter. Personalisation in survey invitations has also been studied, with more varied results (Luiten, 2011). Survey respondents may also reduce their burden by responding to surveys at greater rates if they are notified that failure to respond will lead to reminder letters (Klofstad, Boulianne, & Basson, 2008). Finding motivating factors and combining those that have been shown to produce higher response rates should be beneficial, but only if the burden associated with consuming more information does not negatively affect response rates.

While much of the published research focuses on adding motivating texts to induce participation, we must also consider that the content of survey communication can include text that is not interesting or irrelevant to the recipient. Privacy and confidentiality concerns must be included, both to assuage the respondents fears and because researchers have ethical and legal obligations to inform survey participants about their rights and researchers have been aware of a small but nontrivial nonresponse effect when privacy concerns are not assuaged (Singer, Mathiowetz, & Couper, 1993). The standardisation of laws across countries (e.g. European General Data Protection Regulation) means that a legal minimum standard has been established, and the nature of the data collected in surveys necessitates going even further to protect data, especially when carrying out surveys with sen-

sitive questions (Tourangeau & Yan, 2007). Privacy and confidentiality concerns have been growing, although they are not the driving force behind the trend of lower response rates in surveys, instead perceptions of response burden contribute more to driving nonresponse rates (Singer & Presser, 2007). This raises an interesting dilemma when designing survey communications. We must balance an ethical obligation to help the participant make an informed decision with a desire to reduce respondent burden. We do not know if they read the section on privacy and confidentiality in the survey invitation. If they do not, the visual appearance of a large block of text may make them less inclined to participate. Understanding what information to present and in what order, may affect participation rates.

A relevant experiment for the present study was carried out by Kaplowitz, Lupi, Couper, and Thorp (2012), who used a full factorial design to test five design features of email and postcard invitations among students, staff and faculty at Michigan State University. They found that longer email invitations performed better than shorter ones (182 vs. 80 words) among faculty and staff but had no effect on students. However, it should be noted that a 182-word email is not very long in the context of large social surveys where participants have little or no existing relationship with the survey organization. Kaplowitz et al. (2012) also found that a link location at the end of an email performed better than one placed at the beginning. Neither main finding from this experiment fits well with the theory that longer texts and reading more words reduces respondent burden. The experiment also showed positive results for using an “authoritative” subject line, that faculty and staff were more likely to respond to emails than postcards, and that students were sensitive to estimates of survey duration. These results indicate that longer email invitations, with links at the end are desirable. Further exploration is needed to determine if these findings hold true in survey invitation letters sent by post for a ‘push-to-web’ survey with no prior contact with a survey organization.

3 Research questions

Based on the above discussion we are left with conflicting evidence regarding the length of the invitation letter and placement of the survey links. Theory would suggest that the more text that must be read, the greater the recipient’s burden. However, evidence from an experiment using a different mode (email) suggests the opposite is true. The main focus of our analysis is on outcomes for the initial web survey, before other modes of contact are used, but we also present evidence from other data collection stages (the effects of the invitation letter only and for the full survey results). This leads to the following research questions:

1. How does the length of mailed survey invitation letters affect participation rates and nonresponse bias?

If the length of the survey invitation letters is associated

with respondent burden, we would expect lower participation rates for long letters, as recipients may be less inclined to engage with them. This, in turn, may lead to biases if groups known to have low response propensities are disproportionately affected by increases in respondent burden.

2. How does the location of the survey link affect participation rates and nonresponse bias?

An early link location reduces the number of words needed to read before participating in the survey. If some recipients are willing to participate in the survey but do not find other information conveyed in the letter interesting or relevant, respondent burden may be lowered when the link is positioned early in the letter.

3. How does the interaction between length and link location affect participation rates and nonresponse bias?

Longer letters with links at the end may require reading more than one page, and information about participation may not be visible on the first page of the letter. If some recipients glance at the letter before engaging with its contents, failing to provide information about participation on first sight may reduce propensities to respond.

4 Study Design

To test the effectiveness of different survey invitation letters, an experiment was embedded in the survey *Young People in Iceland* (Einarsson & Jónsdóttir, 2021).¹ The survey contained questions about respondents’ economic conditions and included questions from the European Social Survey dealing with “timing of life.” A simple random sample of Icelandic citizens aged 18–35 was drawn from the national registry. The sample included 2000 named individuals, with listed addresses and some demographic variables; including age, gender and urbanicity (defined in Iceland as living in the Greater Reykjavík area² or not). Having a registered address is a legal requirement in Iceland. However, not all addresses are updated when people move. Furthermore, young person’s legal address may be listed at their parents’ residence even if they reside elsewhere. In summary, the register provides good, but not perfect, coverage for postal contacts.

A 2 × 2 factorial design was used to allocate the sample completely at random into four groups based on two treatments (see table 1 in the results section for descriptive statistics). Sampled units received either a short text (227 words for invitation letters, 280 for reminder letters) which fits on the front page of a one page A4 letter, or a long text (647

¹We would like to thank the Social Science Research Institute at the University of Iceland conducting the survey and collecting the data, which was done in accordance with the Icelandic Data Protection Act.

²The Greater Reykjavík area is a group of adjacent municipalities within 15km of downtown Reykjavík. These are Reykjavík, Kópavogur, Hafnarfjörður, Garðabær, Mosfellsbær and Seltjarnarnes.

words for invitation letters, 671 for reminder letters) covering both sides of a one page letter (see Appendix). It should be noted that even the short version used in this experiment is longer than the long version used in the email invitations in the study presented in (Kaplowitz et al., 2012). This highlights the different challenges of contacting a fresh sample compared to one where a pre-existing sample is in place, as well the differences between contact modes.

The short letters used in our experiment were designed by taking a standard letter template used for surveys by the Social Science Research Institute and shortening it where possible. Longer letters used the short texts as a base, but topics were discussed in greater detail. To ensure that those details were of good quality, text from letters used in the Understanding Society surveys (2018) was interspersed in the longer letters. Large scale surveys such as Understanding Society and the GESIS panel have been implemented using around 500 word, two-page invitation letters, with links presented on the first page, so letters with longer texts in this experiment are long, but not excessively so. The longer letters were 2.8 (invitation) and 2.4 (reminder) times longer than the shorter letters, placing a larger cognitive burden on recipients. As the experiment focused on length, the letters were designed to provide the same content, in the same order, but with varying degrees of detail. In order of appearance, the sections were: Introduction and survey topic, plea for help, expected completion time, coverage and reasons for sending to this specific individual, informing the sampled unit that no replacement was possible, how the results would be used, motivational text, anonymity and confidentiality promises, data protection, and contact information for the survey organisation. Beyond increasing the word count, respondent burden in survey letters could be increased by using more complex language, e.g. by using longer words. This was not the case in our experiment, as the letters were at the reading level of 14–15-year-olds (Flesch Kincaid Grade Level: 9.7 (short) and 9.8 (long) Kincaid, Fishburne, Rogers, & Chissom, 1975).

While both short and long letters dealt with the same themes, by definition, shorter letters do not contain the same amount of information as long ones. The longer letters used in this experiment have more detailed explanations and provide more motivation and assurances. The shorter letters only provide the minimum needed to convey the survey request to the recipient. To minimize the word count in the short letters in this experiment, we moved text from the letter to the landing page of the survey on the computer screen. For example, in our study, the long letter mentions that participation is voluntary while the short letter does not. Participants in the web survey entered unique passwords upon reaching the survey website. Before answering any questions, a data protection and confidentiality screen was shown, which told all participants that participation was voluntary and that re-

spondents could ask that their responses be deleted at any time during the data collection period. This ensures that all respondents are aware of their rights, even if they are conveyed differently based on the letter type.

The second treatment was the location of participation instructions and the survey link. We compare two link placements, at the end or in the middle of the letter. This treatment split the letter into two parts, the first dealing directly with survey participation (e.g. presenting the survey and its topic) and the second with factors external to participation (e.g. data protection, contact information). Information on participating online and the survey link were presented at the relevant position, either in the middle of the letter or at the end. Those who received letters with the links at the end and thus were likelier to read the entire letter, theoretically faced a greater burden than those who received a letter with a link in the middle, as the latter group could proceed to the survey without reading about factors external to participation. Importantly, those who received long letters with links at the end could not see the link unless they turned the letter over while the link was on the front page of the other three letter types.

Fieldwork took place from January to March 2020. A sequential mixed-mode data collection protocol was used, starting with a mailed survey invitation letter to a web survey, followed up with a reminder letter 10 days later and finally, two weeks later nonrespondents with listed telephone numbers were asked to complete the survey by telephone. The invitation and reminder letters were effectively the same, with length and link location corresponding to the unit's treatment group. The reminder letter (see Appendix) added acknowledgement of previous contact and information that respondents would be eligible for a lottery prize (five respondents randomly drawn to receive gift cards worth 10,000 ISK)³. All reminder letters mentioned incentives on the first page in bolded text. Non-respondents were contacted by telephone and asked to complete the survey over the phone. Those who refused were then asked if they would provide an email address to which the survey could be sent. Modes were offered sequentially, as some prior research has shown that concurrent offers reduce response rates (Medway & Fulton, 2012), although concurrent mode offerings can be successful in some context, e.g. when coupled with incentives (Biemer et al., 2018). A total of 997 responses were gathered. A total of 662 interviews were completed on the web, and 335 over telephone.

5 Methods

The dependent variable is a dichotomous indicator of response, taking a value of 1 if the sampled unit has responded and 0 if no response has been recorded. As the experiment

³ 10000 ISK \cong 65 EUR \cong 80 USD

is intended to test the effectiveness of the contact mode, partial responses are also assigned the value 1, as they indicate that the contact successfully brought the participant to the survey. To ensure equivalence between experimental groups and eligibility for the mail stages of the survey, those who had the wrong address listed (letters returned by the postal service, listed as undeliverable) in the national registry are not included in the analysis, as the effects of invitation letters cannot be measured even if their response is gathered by telephone or email at later stages of data collection. Therefore, analyses proceed using AAPOR cooperation rates (AAPOR COOP2), where ineligible cases have been excluded (American Association for Public Opinion Research, 2016). Undeliverables result in a total of 158 cases are removed from the analyses (49 of those with wrong addresses listed responded to the survey after telephone contacts). Removing these cases does not affect the balance of the experimental groups (see table A1 in the Appendix). Response rates for the four different letter types and for the two treatments are initially compared using χ^2 tests.

To model the treatment effects, and their interaction, logistic regression models were estimated for the three stages of data collection. Model 1 predicts survey participation based on responses recorded prior to the arrival of the reminder at sample members' registered addresses and therefore includes only the effects of receiving one mailed letter. Model 2 predicts participation using all web respondents who had already participated prior to being contacted by telephone.⁴ Model 3 includes all responses, regardless of the mode and time of response. In all the models, an interaction effect between length and link location is included, to test whether the added burden of locating the link on the second page of the letter (which is only the case in long letters with links at the end) is significant (RQ3).

As an estimate of data quality, we calculate non-response bias across letter types and data collection stages. By comparing our observed estimates of proportions of persons by age groups, gender and urbanicity in the responding sample to the true proportions in the National Register which was used as the sampling frame. Comparing these subgroup response rates to the true proportions found in the register gives us an estimate of non-response bias. We also calculate the mean squared error (MSE) to include both non-response bias and the variance from the sample (Biemer, 2010). As this experiment only varies the design of the letters, we expect differences in bias and MSE between experimental groups to be an indicator of non-response bias.

6 Results

Descriptive statistics are shown in Table 1, which is broken down to show summary statistics for three demographic variables (age, gender and urbanicity) for the full sample, for correct addresses only (ineligibles excluded) and for re-

spondents and nonrespondents. No statistically significant differences were found when comparing demographic variables. This indicates that randomisation was successful when formulating the experimental groups, both for the full sample and when ineligibles are excluded. Females constitute a greater proportion of respondents (52.1%) than they do non-respondents (42.8%), but response does not differ noticeably in terms of average age and proportion of rural respondents.

The overall response rate for the survey (American Association for Public Opinion Research Response Rate 2 (AAPOR RR2)) was 49.9%. However, as we are examining the effects of the different letter types, all analyses are limited to the cases with eligible addresses. The overall cooperation rate (COOP2) for individuals with correct addresses listed is 51.5%. An overview of the cooperation rates by experimental groups for each data collection stage can be found in Table 2. As shown in Table 2, the four types of letters varied in terms of overall cooperation rate (AAPOR COOP2), as letters with the long text and the link at the end underperformed compared to the other types of letters. When only considering individuals with the correct address listed in the national register, cooperation rates for that experimental group were 47.5%, compared to an average cooperation rate of 52.8% for the other groups combined. On average, the shorter letters produced an overall cooperation rate of 53.7% and 49.2% for longer letters. The cooperation rate for letters with the link at the end of the letter is 50.4%, compared to 52.5% for letters with links in the middle of the letter. To study the effects of these treatments we proceed to analyse them and the effect of their interaction.

Figure 1 shows how responses were gathered over time, grouped by the type of letter sent. The vertical lines denote major changes in data collection protocol. They depict respectively, the timing of the invitation letter, the reminder letter and finally the telephone and emails reminders. The figure is faceted by response type, showing how many responses were gathered online (right side, effects of letters and emails) and overall (left side), by including responses gathered by telephone. Figure 1 also shows that most responses are gathered in the first few days of each data collection stage, when the letters arrive and when telephone calls begin. Others respond several days after receiving the letters and others are hard to reach by telephone, leading to a slow uptick in the number of responses until the next stage begins. Similarly, there is a slow increase in the number of web responses after the telephone survey starts, as some respond to the survey having received an invitation by email after having refused to complete the survey on the phone.

⁴While it is possible that some of the respondents in Model 2 were responding to the invitation letter, there is a sharp decline in the number of responses in the days preceding their receipt of the reminder letter, so excluding them from Model 1 should be a minor issue.

Table 1
Descriptive statistics

	N	Mean Age	Age (SD)	Female (%)	Rural (%)
Full sample	2000	26.15	5.18	47.2	34.7
Long-End	500	26.12	5.16	45.8	33.8
Long-Middle	500	26.12	5.16	48.6	34.2
Short-End	500	26.11	5.31	48.0	35.8
Short-Middle	500	26.23	5.13	46.2	35.0
Correct address	1842	26.11	5.24	47.6	35.3
Respondents ^a					
Long-End	216	26.14	5.26	49.5	37.5
Long-Middle	235	25.96	5.32	56.2	35.7
Short-End	249	25.86	5.54	54.6	35.3
Short-Middle	248	25.99	5.31	48.0	36.3
All respondents	948	25.98	5.36	52.1	36.2
Non-respondents ^a					
Long-End	239	26.05	5.16	43.9	30.5
Long-Middle	226	26.28	5.07	42.5	35.4
Short-End	218	26.34	5.15	41.3	37.2
Short-Middle	211	26.35	5.06	43.6	35.1
All non-respondents	894	26.25	5.10	42.8	34.5

^a correct addresses only

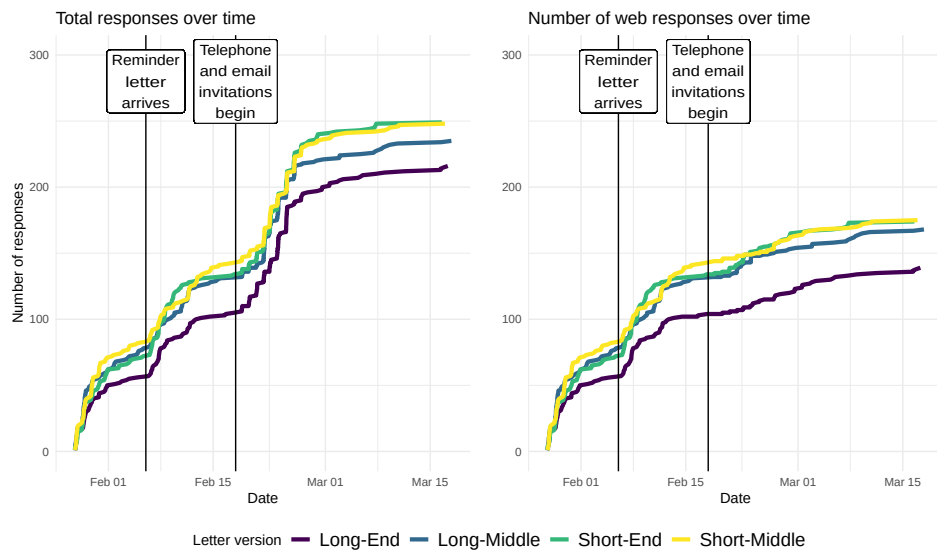


Figure 1. Cumulative number of respondents by letter type over time (vertical lines represent beginning of new data collection stage)

To model response propensities, logistic regression models representing the three data collection stages are shown in Table 3. The results of the logistic regression models show that shorter letters outperformed longer letters in terms of participation rates after the reminder letters, but not at other stages of data collection. Predicted probabilities of response after receiving both invitation and reminder letters are

24.8% for long letters compared to 31.7% for short letters (Odds Ratio = 1.40, 95% C.I. = [1.05, 1.88]). The difference in response probabilities is not significant for the full survey results (Long = 47.5%, Short = 53.3%, [OR = 1.26, 95% C.I. = [0.98, 1.64]]), or after the invitation letter only (Long = 12.3%, Short = 15.4%, OR = 1.30, 95% C.I. = [0.89, 1.90]). However, they are consistently positive across

Table 2
Response and cooperation rates by letter type and data collection stage

	Letter type			Length treatment		Link location treatment		All (%)	N	
	Long-End (%)	Long-Middle (%)	Short-End (%)	Short-middle (%)	Long-letter (%)	Short-letter (%)	Link at end (%)			Link in middle (%)
All responses										
(Web + Tel.; RR2)	45.6	49.6	51.8	52.4	47.6	52.1	48.7	51.0	49.9	997
(Web + Tel.), correct addresses only (COOP2)	47.5	51.0	53.3	54.0	49.2	53.7	50.4	52.5	51.5	948
Web survey (COOP2)										
Invitation letter	12.3	16.7	15.4	18.1	14.5	16.7	13.9	17.4	15.6	288
Reminder letter	12.5	14.5	16.3	15.7	13.5	16.0	14.4	15.1	14.8	272
Mail stage (Invitation + reminder; COOP2)										
Responses	24.8	31.2	31.7	33.8	28.1	32.7	28.3	32.5	30.4	560
Responses after email reminder	5.7	5.2	5.6	4.4	5.5	5.0	5.6	4.8	5.2	96
All web responses	30.5	36.4	37.3	38.1	33.5	37.7	33.9	37.3	35.6	656
Responses by telephone (COOP2)	16.9	14.5	16.1	15.9	15.7	16.0	16.5	15.2	15.9	292
N	455	461	467	459	916	926	922	920	-	1842

data collection stages and are indicative that sample sizes may be too small to provide evidence of significant differences. These results indicate that shorter letters can have positive effects on propensities to respond to web surveys. However, these differences can to some degree be mitigated by further data collection efforts.

The logistic regression models show similar trends for the link location treatment, where significant differences are found after the reminder letter was sent out, but not at other stages of data collection. Link location produces comparatively large, but not statistically significant, differences in predicted propensities after the invitation letter is sent, with 12.3% responding to letters with links at the end compared to 16.7% when the link is placed in the middle (OR = 1.43, 95% C.I. = [0.99, 2.08]). After the effects of the reminder letters is added, the difference becomes statistically significant (End = 24.8%, Middle = 31.2%, OR = 1.37, 95% C.I. = [1.03, 1.84]). By exerting further data collection efforts, in this case the telephone survey and email reminders, the effect becomes non-significant (End = 47.5%, Middle = 50.1%, OR = 1.15, 95% C.I. = [0.89, 1.49]). An interaction effect between length and link location was included in all models to test RQ3. However, while the interaction effect consistently points in the same direction, it was not significant in any of the models. Results were tested for sensitivity by adding demographic variables to the regression models (age, gender and urbanicity), which does not change the substantive results (see Table A1 in the Appendix).

Differences in subgroup cooperation rates are explored in terms of bias (defined as the difference between the observed sample proportion and the true proportion obtained from the National Register which was used as the sample frame) and mean squared error in Table 4. Large biases are found across letter types when it comes to age groups. The trend is not linear, with the youngest age group being overrepresented and those aged 24–29 being underrepresented, while there is comparatively little bias for the oldest age group. Women are overrepresented, as is the proportion of rural respondents. When looking at the effectiveness of letter types, short letters with links in the middle, the letter type with the highest cooperation rate, has no absolute biases larger than 2.6% and is around or under the absolute biases of the full sample results for all the variables examined. The same holds true for the letter type that had the lowest cooperation rate (Long-End), apart from an overrepresentation on the percentage of rural respondents. The highest absolute biases tend to belong to the Short-End letter type, which resulted in large biases for age, particularly the age group 24–29 years-old (underrepresented by 8.2%) and gender (men underrepresented by 6.0%). Finally, the group Long-Middle showed low biases for many variables, but men were severely underrepresented (7.5%) in the responding sample for that group.

Comparing letter types, no clear pattern emerges in terms

of bias and MSE across all variables. However, it is worth noting that large biases for gender are not found in the short-middle and long-end letters. This is surprising as these letter types had the highest and lowest cooperation rates, but they seem to have achieved greater balance in terms of gender composition compared to the other letter types. They are also closer to the register proportion of people aged 24–29, an underrepresented group in the sample of respondents. While biases and MSE do not present a uniform result, looking at individual variables (particularly gender) reveals interesting differences between the sample of respondents and group proportions in the National Register.

Figure 2 explores non-response bias across data collection stages (see Table A2 in the Appendix for detailed results). In general biases decrease as more responses are gathered, particularly when looking at the age composition of the sample. Telephone contacts appear to successfully reach a large percentage of the underrepresented age group of 24–29-year olds. Bias for gender is highest after the reminder letter is sent out, but this is driven by the strange pattern of the long-end group, which saw a surprisingly large number of men respond to the invitation letter compared to other letter versions. Urbanicity does not result in large biases at any stage, but they are larger for the full survey results than for the results after mail invitations only. These results show that mixing data collection modes improves data quality, both in terms of the number of responses gathered and in terms of reducing nonresponse bias.

7 Discussion and conclusions

This paper investigated the effects of text length and link location on survey invitation and reminder letters sent by mail in a sequential mixed-mode data collection protocol. Using a factorial experimental design, we randomly allocated sampled individuals into one of four treatment groups, receiving survey invitation and reminder letters that contained: short texts with invitation links in the middle of the letter, short texts with links at the end of the letter, long texts with links in the middle of the letter or long texts with links at the end of the letter. The results of this experiment showed that both mailed letters with shorter texts and letters with links in the middle of the letter (but not the combination of these treatments) lead to significant improvements in cooperation rates in the web survey following the delivery of reminder letters, but not for the full survey results. These results are consistent with the theory that reducing respondent burden in survey communications can improve participation rates among subgroups with low response rates.

The results of this experiment show that sending letters with long texts may negatively affect their disposition towards participating in the survey. These results support RQ1, as they indicate that the length of mailed survey invitations can affect participation rates. Survey participation should be

Table 3
Odds ratios and Standard Errors from Logistic Regression Models of Response by Data Collection Stage

	Invitation letter		Reminder letter		All responses	
	OR	SE	OR	SE	OR	SE
Length: Short	1.30	0.19	1.40*	0.15	1.26	0.13
Link: Middle	1.43	0.19	1.37*	0.15	1.15	0.13
Length×Link	0.85	0.26	0.80	0.20	0.89	0.19
Constant	0.14***	0.14	0.33***	0.11	0.90	0.09
N	1842		1842		1842	
AIC	1598.79		2260.97		2555.17	
BIC	1620.87		2283.05		2577.24	
Pseudo R2	0.01		0.01		0.00	

Reference groups: Length: Long, Link: End
 * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 4
Analysis of nonresponse bias (%) and mean squared error across letter types

	Age 18-23		Age 24-29		Age 30-35		Female		Rural	
	Bias	MSE	Bias	MSE	Bias	MSE	Bias	MSE	Bias	MSE
Long-End	2.62	0.18	-0.93	0.11	-1.68	0.12	0.90	0.12	3.77	0.25
Long-Middle	3.50	0.22	-3.24	0.20	-0.25	0.09	7.53	0.67	2.01	0.14
Short-End	7.01	0.59	-8.22	0.75	1.22	0.10	5.98	0.46	1.61	0.12
Short-Middle	2.34	0.15	-2.47	0.15	0.14	0.09	-0.66	0.10	2.56	0.16
All	3.92	0.18	-3.82	0.17	-0.09	0.02	3.47	0.15	2.45	0.08

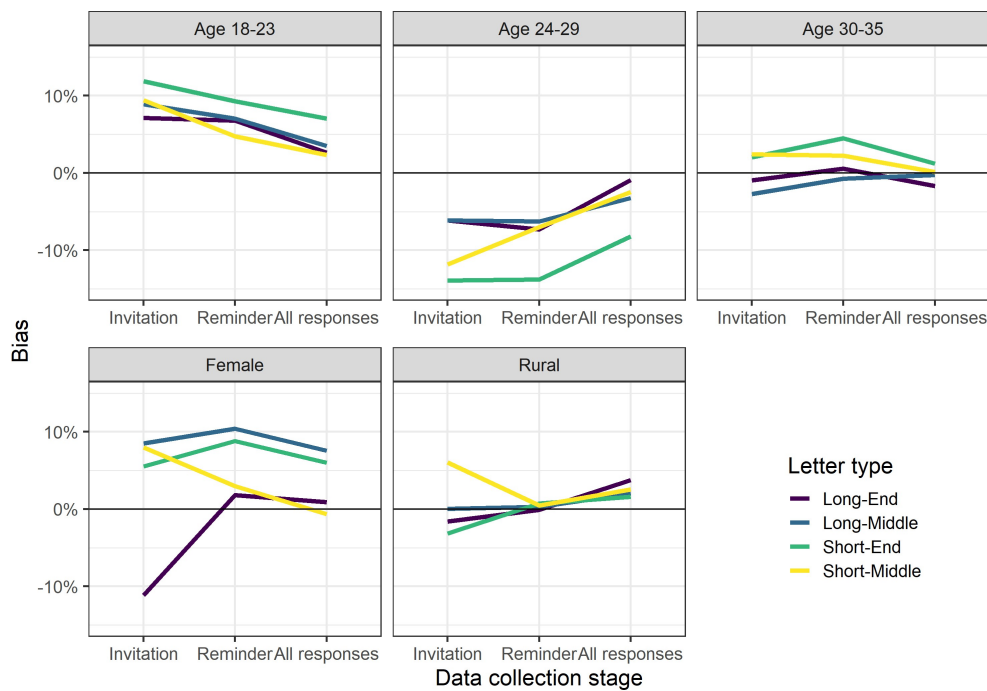


Figure 2. Nonresponse bias (%) for letter versions across data collection stages

thought of as a multi-stage process, starting with the reception of the survey invitation letter. The design of survey communications should reflect that some respondents are averse to reading long texts. Even though some features may hold leverage, some recipients may not engage with the letter at all if they perceive engaging with it as being too burdensome. Another way to reduce respondent burden when it comes to mailed invitations is to split the letter into sections: by first providing the information that the recipient needs to understand what is being asked of him/her and how they can participate and then following up with information about the responsibilities and commitments of the researchers and survey sponsors. Having split the letter into sections, placing the link in the middle can help recipients that are interested in participating in the survey, but not in the broader aspects of the research, get to the survey faster. RQ2 is supported when looking at results from the web survey only, as this experiment shows that link location in mailed survey invitations can affect cooperation rates. The effects of the experimental treatments used in this study are statistically significant, but not very strong. This is not unexpected, as the design of an invitation letter is unlikely to be the determining factor for survey participation. However, in a challenging survey climate, marginal improvements such as those found in this experiment are worth seeking out, especially if they come at no additional cost to the survey project.

Of the four experimental groups, the fewest responses were gathered among the group that received the long letter with the link on the second page of the letter. However, the logistic regression models did not show a significant interaction effect between length and link location and therefore RQ3 is not supported by the data. Therefore, we cannot conclude that placing the link on the front page would be sufficient when designing such survey invitations. However, the sample size in this experiment is small compared to many experiments testing survey data collection protocols, and as the interaction consistently lowers the odds ratio of response, it is possible that significant results would have been found if greater statistical power was available. While the interaction effect is not significant, the low cooperation rate gathered using the long-end version should be a cause of concern, and designers of survey communications should consider the risk of not placing survey links on the first page of the letter.

Treatment effects differed across data collection stages. Both length and link location were significant after the reminder letters were sent, but not at other stages (invitation letter and full survey results). These results indicate that some, but not all, responses lost due to inefficient design can be reclaimed by exerting more data collection efforts. However, additional contacts are costly for the survey organisation and time-consuming for the respondent, making this a sub-optimal strategy. If data collection efforts for this survey had stopped after the mailed invitation stages, the resulting

data would have had substantial biases. Underperforming invitations can reduce the statistical power and representativeness of the resulting sample in a survey where only mail invitations are used, which is mediated somewhat by using telephone and email reminders for follow-up in this experiment.

To explore the effects of our treatments on non-response error, we looked at bias and mean squared error with respect to the true variables in the National Register. We did not find clear advantages for one letter type over the others across all variables. However, the design with the highest cooperation rate (short letters with links in the middle) performed well, particularly in terms of gender composition. Surprisingly, long letters with links at the end performed similarly in terms of bias, potentially at the cost of recording the fewest responses. One reason why this might be is that young men may be more sensitive than women to the increases in burden that were introduced by these invitation designs. They respond at lower rates both when burden is increased by lengthening the letters and when links are placed at the end of letters. Further increasing burden by combining the effects of suboptimal length and link location reduces the number of female respondents as well, thereby reducing bias at the cost of even lower cooperation rates. Further examination on how to achieve cooperation among reluctant young men is something that could prove very beneficial to survey researchers.

The letters used in this experiment tested only two treatments, and there are other aspects that should be considered when designing survey communications. As an example, the visual design of our letters can be improved. Increasing sample sizes in future experiments will also be beneficial, as the effect sizes found in this experiment were small. Addressing privacy concerns effectively is also worth considering, as this experiment suggests that the average respondent may not be particularly interested in reading about things external to survey participation, such as data protection rights and how to contact the survey organisation. This does not absolve the survey organisation from providing the information. To ensure that the information was properly communicated, respondents to this survey were informed of their rights on the landing page of the web survey.

Another interesting topic for further research is the importance of the relationship between respondent and survey organization. Previous research has found that for email invitations, longer texts and those with links at the end outperformed shorter texts with links at the beginning of the text (Kaplowitz et al., 2012). In the context of email communications, the relationship with the survey organisation or sponsor is usually established and the recipient can make a quick decision based on the email subject and seek out the hyperlink without giving much attention to the contents of the email. Our results stand in contrast to their findings, which may be explained by the lack of a pre-existing relationship between

individuals in our sample and the survey organisation and where mailed invitations and reminders were sent to participate in the web survey.

We have looked at the effects of these treatments on demographic variables with known distributions from the National Register, but further research is needed to study their effects on other variables. Education levels and their interactions with other variables are particularly interesting in this regard, as we may find an association between that variable and respondent burden when it comes to reading survey communications. Experiments that vary the complexity of instructions in survey invitations are another interesting avenue of research which could be further explored, since explaining a survey request in a simple manner is not always a simple task. The role of incentives is always relevant in survey research and exploring the interaction between incentives and respondent burden in survey invitations is an interesting possibility.

Reaching a representative sample of respondents should motivate survey communication design. Therefore, attention should be paid to groups of people that have low participation propensities. The demographic variables which affect participation rates in surveys may differ across countries. The sampled group in this experiment, young adults (18–35-year-olds) in Iceland, is often underrepresented in the final sample of respondents in surveys. The age group responded at a rate of 36.5% in the European Social Survey round 8, compared to a rate of 48.1% among all other respondents, which results in a need to apply larger weights than is desirable to make valid inferences. As our results have shown, subgroups within this age group are not homogeneously affected by increases in burden, which complicates compensating for non-response biases. Underrepresentation is not uniformly present to the same extent in other countries in the European Social Survey round 8,⁵ as young adults respond at about the same rate (50.4%) as older people (52.5% ESS, 2016)⁶. Boosting participation rates among young people may therefore improve the overall quality of data collected in Iceland, but in other countries different groups may need to be considered.

While the population used in this experiment limits external validity, it does provide useful insights and avenues for further research. More experiments are needed among populations of all age groups and as well as in other countries. Furthermore, exploring the effects of respondent burden on using other contact modes, e.g. how telephone surveys are presented to the participant may prove fruitful. Reducing text length in the invitation letter means presenting less information. This can be done either by offering less detail or by excluding some topics. In our experiment we aimed for the former approach. One exception is the statement regarding the voluntary nature of participation which was displayed on the landing page of the web survey instead of the invitation

letter.

Designing survey communications requires survey researchers to put themselves in respondents' shoes. They must find the path of least resistance when it comes to disseminating information provided in the contact while considering the disposition of low propensity respondents carefully. In this experiment, we have focused on one low propensity group, young people in Iceland, and found that they are sensitive to respondent burden. These results serve as a reminder that relatively minor changes to protocol can affect overall survey outcomes. The key recommendations to be drawn from this experiment are to keep the letters concise and focused on facilitating participation, by reducing the burden of reading information that is not important to all recipients. This can increase participation in surveys. More research is needed to show if these results are replicated within other studies and other populations.

8 Acknowledgement

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⁵Only countries with individual sampling units included.

⁶Response rates (AAPOR RR1) calculated by authors.

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Appendix

(Appendix tables follow on next page)

Table A1
Odds ratios and Standard Errors from Logistic Regression Models of Response by Data Collection Stage, sensitivity analysis including demographic variables

	Invitation letter		Reminder letter		All responses	
	OR	SE	OR	SE	OR	SE
Length: Short	1.28	0.19	1.39*	0.15	1.25	0.13
Link: Middle	1.43	0.19	1.37*	0.15	1.14	0.13
Length×Link	0.87	0.26	0.82	0.21	0.92	0.19
Female	1.25	0.13	1.51***	0.10	1.45***	0.09
Age 24-29	0.58***	0.16	0.60***	0.13	0.80*	0.11
Age 30-35	0.79	0.15	0.87	0.12	0.88	0.12
Rural	0.93	0.14	0.90	0.11	1.06	0.10
Constant	0.16***	0.18	0.34***	0.14	0.83	0.13
N	1842		1842		1842	
AIC	1591.34		2233.98		2542.81	
BIC	1635.49		2278.13		2586.95	
Pseudo R2	0.02		0.03		0.02	

Reference groups: Length: Long, Link; End, Gender: Male, Age: Age 18-23, Urbanicity: Urban
 * $p < .05$ ** $p < .01$ *** $p < .001$

Table A2
Analysis of nonresponse bias (%) and mean squared error across letter types and data collection stages

	Age 18-23		Age 24-29		Age 30-35		Female		Rural	
	Bias	MSE	Bias	MSE	Bias	MSE	Bias	MSE	Bias	MSE
Invitation letter										
Long-End	7.12	0.94	-6.16	0.74	-0.95	0.39	-11.14	1.66	-1.59	0.41
Long-Middle	8.91	1.11	-6.16	0.64	-2.74	0.34	8.50	1.04	0.04	0.29
Short-End	11.88	1.76	-13.90	2.16	2.02	0.35	5.53	0.65	-3.17	0.40
Short-Middle	9.42	1.18	-11.84	1.61	2.42	0.33	7.99	0.93	6.03	0.65
All	9.45	0.98	-9.73	1.01	0.29	0.08	3.79	0.23	0.65	0.08
Reminder letter										
Long-End	6.76	0.67	-7.30	0.71	0.55	0.20	1.80	0.25	-0.10	0.20
Long-Middle	7.02	0.66	-6.26	0.53	-0.75	0.15	10.39	1.25	0.30	0.16
Short-End	9.29	1.03	-13.78	2.01	4.50	0.36	8.79	0.94	0.73	0.16
Short-Middle	4.76	0.38	-6.99	0.62	2.24	0.19	2.97	0.25	0.46	0.15
All	6.94	0.53	-8.66	0.78	1.73	0.07	6.18	0.43	0.38	0.04
Full survey results										
Long-End	2.62	0.18	-0.93	0.11	-1.68	0.12	0.90	0.12	3.77	0.25
Long-Middle	3.50	0.22	-3.24	0.20	-0.25	0.09	7.53	0.67	2.01	0.14
Short-End	7.01	0.59	-8.22	0.75	1.22	0.10	5.98	0.46	1.61	0.12
Short-Middle	2.34	0.15	-2.47	0.15	0.14	0.09	-0.66	0.10	2.56	0.16
All	3.92	0.18	-3.82	0.17	-0.09	0.02	3.47	0.15	2.45	0.08



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, 22. January 2020

**[Name
Address
Postcode, Community]**

The Social Science Research Institute ask for your participation in a survey among young people in Iceland. Topics include at what age people should make important life choices and attitudes towards important issues. We ask for your help to improve our research by completing the survey, which takes around **10 minutes**.

About the study

A sample of 2000 people aged 18-35 is invited to participate in this survey, your name was selected and cannot be replaced with another person. The goal of the survey is to compare the attitudes of young people and older people.

Why do your attitudes matter?

By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results which will be used by researchers and policy makers.

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

If you have any questions or require further information about the survey, you can contact [name], project manager at the Social Sciences Research Institute, by e-mailing [email] or by telephone [number].

Completing the survey online

To participate in the survey, go to the website [\[link\]](#), click the link "Survey title" and enter the following password: **[Password]**

Thank you in advance and with hope for a good reception,

[Signature]

[Name]

Director of the University of Iceland Social Science Research Institute

[Institutional contact information]

Figure A1. Sample invitation letter (English version), short text with link at the end



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, 22. January 2020

**[Name
Address
Postcode, Community]**

The Social Science Research Institute ask for your participation in a survey among young people in Iceland. Topics include at what age people should make important life choices and attitudes towards important issues. We ask for your help to improve our research by completing the survey, which takes around **10 minutes**.

About the study

A sample of 2000 people aged 18-35 is invited to participate in this survey, your name was selected and cannot be replaced with another person. The goal of the survey is to compare the attitudes of young people and older people.

Completing the survey online

To participate in the survey, go to the website [\[link\]](#), click the link "Survey title" and enter the following password: **[Password]**

Why do your attitudes matter?

By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results which will be used by researchers and policy makers.

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

If you have any questions or require further information about the survey, you can contact [name], project manager at the Social Sciences Research Institute, by e-mailing [email] or by telephone **[number]**.

Thank you in advance and with hope for a good reception,

[Signature]

[Name]
Director of the University of Iceland Social Science Research Institute

[Institutional contact information]

Figure A2. Sample invitation letter (English version), short text with link in the middle



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, 22. January 2020

**[Name
Address
Postcode, Community]**

The Social Science Research Institute ask for your participation in a survey among young people in Iceland. The questions asked deal with at what age people should make important life choices, such as marrying or starting to work, as well as attitudes towards important economic, environmental and social issues. *Which issues are more important to young people than older people? How likely are you to buy a new home in the next year? At what age should a person start working and when should they stop?* These and other important topics are explored in the survey. Your participation in this survey is greatly appreciated by the research team, and we ask for your help to make this research project even better by completing our survey online, which takes around **10 minutes**.

About the study

This survey covers 2000 people from a random sample of people aged 18-35 throughout the country, and your name was one of those selected. Because you were selected and cannot be replaced with another person, it is important for us to get your response to the survey.

The study is being conducted concurrently with a large survey that covers people of all ages living in Iceland. The goal of the survey is to study which issues matter to young people and to compare their attitudes to those of older people. Combining the results from the surveys helps us find out about the issues that matter to everyone and to put a greater focus on the issues that matter most for young people. The information we collect can inform government policy and is used by academics and researchers who work to meet your needs.

Why is your opinion important?

By taking part, your voice is heard. Without your input, the survey will be less complete. The strength of the survey is that it talks to a wide cross section of the population of young people living in Iceland. That way, we can see how factors such as the economy and the way our society is changing affect young people's lives across the whole of Iceland. That's why we need your opinions and why your participation is crucial to the accuracy of our research.

By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results. Thank you for helping with the survey. The survey helps researchers and policy makers understand the changes in the needs of the country – and because your information is so valuable, we'd like to hear from you.



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. Your participation is entirely voluntary, but we do hope you'll be able to help. We take your data security very seriously and take all possible steps to ensure that your data is protected. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

Please do not hesitate to contact us if anything is unclear about your participation in this survey. If you have any questions or require further information about the survey, you are welcome to contact [name], project manager at the Social Sciences Research Institute, by e-mail to [email] or telephone [number].

Completing the survey online

The survey is available online at the website shown below, so you can complete it at a time that's best for you. (The survey can be completed on a mobile device, but for the best experience please use a computer or a laptop.)

To access the survey please type www.fel.hi.is/surveys into the navigation bar on your Internet Browser. When you've reached the website, click the link "**Survey title**" and you'll be asked to enter your password. Please input your password into the space provided and press **forward**.

Your password is: **[Password]**

Thank you in advance and with hope for a good reception,

[Signature]

[Name]

Director of the University of Iceland Social Science Research Institute

Figure A3. Sample invitation letter (English version), long text with link at the end



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, 22. January 2020

**[Name
Address
Postcode, Community]**

The Social Science Research Institute ask for your participation in a survey among young people in Iceland. The questions asked deal with at what age people should make important life choices, such as marrying or starting to work, as well as attitudes towards important economic, environmental and social issues. *Which issues are more important to young people than older people? How likely are you to buy a new home in the next year? At what age should a person start working and when should they stop?* These and other important topics are explored in the survey. Your participation in this survey is greatly appreciated by the research team, and we ask for your help to make this research project even better by completing our survey online, which takes around **10 minutes**.

About the study

This survey covers 2000 people from a random sample of people aged 18-35 throughout the country, and your name was one of those selected. Because you were selected and cannot be replaced with another person, it is important for us to get your response to the survey.

The study is being conducted concurrently with a large survey that covers people of all ages living in Iceland. The goal of the survey is to study which issues matter to young people and to compare their attitudes to those of older people. Combining the results from the surveys helps us find out about the issues that matter to everyone and to put a greater focus on the issues that matter most for young people. The information we collect can inform government policy and is used by academics and researchers who work to meet your needs.

Completing the survey online

The survey is available online at the website shown below, so you can complete it at a time that's best for you. (The survey can be completed on a mobile device, but for the best experience please use a computer or a laptop.)

To access the survey please type www.fel.hi.is/surveys into the navigation bar on your Internet Browser. When you've reached the website, click the link "**Survey title**" and you'll be asked to enter your password. Please input your password into the space provided and press **forward**.

Your password is: **[Password]**



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Why is your opinion important?

By taking part, your voice is heard. Without your input, the survey will be less complete. The strength of the survey is that it talks to a wide cross section of the population of young people living in Iceland. That way, we can see how factors such as the economy and the way our society is changing affect young people's lives across the whole of Iceland. That's why we need your opinions and why your participation is crucial to the accuracy of our research.

By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results. Thank you for helping with the survey. The survey helps researchers and policy makers understand the changes in the needs of the country – and because your information is so valuable, we'd like to hear from you.

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. Your participation is entirely voluntary, but we do hope you'll be able to help. We take your data security very seriously and take all possible steps to ensure that your data is protected. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

Please do not hesitate to contact us if anything is unclear about your participation in this survey. If you have any questions or require further information about the survey, you are welcome to contact [name], project manager at the Social Sciences Research Institute, by e-mail to [email] or telephone [number].

Thank you in advance and with hope for a good reception,

[Signature]

[Name]

Director of the University of Iceland Social Science Research Institute

Gimli, Sæmundargata 10 | 101 Reykjavík | Tel 525 4545 | Fax 525 4179 | Email felagsvisindastofnun@hi.is

Figure A4. Sample invitation letter (English version), long text with link in the middle



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, February 3rd, 2020

**[Name
Address
Postcode, Community]**

A few days ago, an introductory letter was sent to you, requesting your participation in a survey about young people Iceland. You were selected randomly from the National Register to participate in the survey.

If you have already completed the survey, we send you our sincere thanks for participating. Your help with this study is greatly appreciated and we hope you found it interesting and enjoyed taking part.

If you have not completed the survey, we kindly ask for your participation. A limited group was selected to participate, and each response is important in order to represent the attitudes of young people living in Iceland.

About the study

A sample of 2000 people aged 18-35 is invited to participate in this survey. The goal of the survey is to compare the attitudes of young people and older people. By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results which will be used by researchers and policy makers. Five lucky participants will receive a **10.000 kr. gift card**. Completing the survey takes around **10 minutes**.

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

If you have any questions or require further information about the survey, you can contact [name], project manager at the Social Sciences Research Institute, by e-mailing [email] or by telephone [number].

Completing the survey online

To participate in the survey, go to the website [\[link\]](#), click the link "Survey title" and enter the following password: **[Password]**

Thank you in advance and with hope for a good reception,

[Signature]

[Name]
Director of the University of Iceland Social Science Research Institute

[Institutional contact information]

Figure A5. Sample reminder letter (English version), short text with link at the end



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, February 3rd, 2020

**[Name
Address
Postcode, Community]**

A few days ago, an introductory letter was sent to you, requesting your participation in a survey about young people Iceland. You were selected randomly from the National Register to participate in the survey.

If you have already completed the survey, we send you our sincere thanks for participating. Your help with this study is greatly appreciated and we hope you found it interesting and enjoyed taking part.

If you have not completed the survey, we kindly ask for your participation. A limited group was selected to participate, and each response is important in order to represent the attitudes of young people living in Iceland.

Completing the survey online

To participate in the survey, go to the website [\[link\]](#), click the link "Survey title" and enter the following password: **[Password]**

About the study

A sample of 2000 people aged 18-35 is invited to participate in this survey. The goal of the survey is to compare the attitudes of young people and older people. By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results which will be used by researchers and policy makers. Five lucky participants will receive a **10.000 kr. gift card**. Completing the survey takes around **10 minutes**.

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

If you have any questions or require further information about the survey, you can contact [name], project manager at the Social Sciences Research Institute, by e-mailing [email] or by telephone **[number]**.

Thank you in advance and with hope for a good reception,

[Signature]

[Name]

Director of the University of Iceland Social Science Research Institute

[Institutional contact information]

Figure A6. Sample reminder letter (English version), short text with link in the middle



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, February 3rd, 2020

**[Name
Address
Postcode, Community]**

A few days ago, an introductory letter was sent to you, requesting your participation in a survey about young people Iceland. You were selected randomly from the National Register to participate in the survey.

If you have already completed the survey, we send you our sincere thanks for participating. Your help with this study is greatly appreciated and we hope you found it interesting and enjoyed taking part.

If you have not completed the survey, we kindly ask for your participation. A limited group was selected to participate, and each response is important in order to represent the attitudes of young people living in Iceland.

About the study

The questions asked deal with at what age people should make important life choices, such as marrying or starting to work, as well as attitudes towards important economic, environmental and social issues. *Which issues are more important to young people than older people? How likely are you to buy a new home in the next year? At what age should a person start working and when should they stop?* These and other important topics are explored in the survey. Five lucky participants will receive a **10.000 kr. gift card**. Completing the survey takes around **10 minutes**.

The study is being conducted concurrently with a large survey that covers people of all ages living in Iceland. The goal of the survey is to study which issues matter to young people and to compare their attitudes to those of older people. Combining the results from the surveys helps us find out about the issues that matter to everyone and to put a greater focus on the issues that matter most for young people. The information we collect can inform government policy and is used by academics and researchers who work to meet your needs.

Why is your opinion important?

By taking part, your voice is heard. Without your input, the survey will be less complete. The strength of the survey is that it talks to a wide cross section of the population of young people living in Iceland. That way, we can see how factors such as the economy and the way our society is changing affect young people's lives across the whole of Iceland. That's why we need your opinions and why your participation is crucial to the accuracy of our research.

[Institutional contact information]



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results. Thank you for helping with the survey. The survey helps researchers and policy makers understand the changes in the needs of the country – and because your information is so valuable, we'd like to hear from you.

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. Your participation is entirely voluntary, but we do hope you'll be able to help. We take your data security very seriously and take all possible steps to ensure that your data is protected. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

Please do not hesitate to contact us if anything is unclear about your participation in this survey. If you have any questions or require further information about the survey, you are welcome to contact [name], project manager at the Social Sciences Research Institute, by e-mail to [email] or by telephone [number].

Completing the survey online

The survey is available online at the website shown below, so you can complete it at a time that's best for you. (The survey can be completed on a mobile device, but for the best experience please use a computer or a laptop.)

To access the survey please type [link] into the navigation bar on your Internet Browser. When you've reached the website, click the link "Survey title" and you'll be asked to enter your password. Please input your password into the space provided and press **forward**.

Your password is: [Password]

Thank you in advance and with hope for a good reception,

[Signature]

[Name]

Director of the University of Iceland Social Science Research Institute

[Institutional contact information]

Figure A7. Sample reminder letter (English version), long text with link at the end



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

Reykjavík, February 3rd, 2020

**[Name
Address
Postcode, Community]**

A few days ago, an introductory letter was sent to you, requesting your participation in a survey about young people Iceland. You were selected randomly from the National Register to participate in the survey.

If you have already completed the survey, we send you our sincere thanks for participating. Your help with this study is greatly appreciated and we hope you found it interesting and enjoyed taking part.

If you have not completed the survey, we kindly ask for your participation. A limited group was selected to participate, and each response is important in order to represent the attitudes of young people living in Iceland.

About the study

The questions asked deal with at what age people should make important life choices, such as marrying or starting to work, as well as attitudes towards important economic, environmental and social issues. *Which issues are more important to young people than older people? How likely are you to buy a new home in the next year? At what age should a person start working and when should they stop?* These and other important topics are explored in the survey. Five lucky participants will receive a **10.000 kr. gift card**. Completing the survey takes around **10 minutes**.

The study is being conducted concurrently with a large survey that covers people of all ages living in Iceland. The goal of the survey is to study which issues matter to young people and to compare their attitudes to those of older people. Combining the results from the surveys helps us find out about the issues that matter to everyone and to put a greater focus on the issues that matter most for young people. The information we collect can inform government policy and is used by academics and researchers who work to meet your needs.

Completing the survey online

The survey is available online at the website shown below, so you can complete it at a time that's best for you. (The survey can be completed on a mobile device, but for the best experience please use a computer or a laptop.)

To access the survey please type [\[link\]](#) into the navigation bar on your Internet Browser. When you've reached the website, click the link "**Survey title**" and you'll be asked to enter your password. Please input your password into the space provided and press **forward**.

Your password is: **[Password]**

[Institutional contact information]



HÁSKÓLI ÍSLANDS
FÉLAGSVÍSINDASTOFNUN

By participating in the survey, you are ensuring that the views of people like you are reflected in the survey results. Thank you for helping with the survey. The survey helps researchers and policy makers understand the changes in the needs of the country – and because your information is so valuable, we'd like to hear from you.

Protecting your data

The survey is anonymous, and the Social Science Research Institute ensures that responses will not be traced to individual participants. Your participation is entirely voluntary, but we do hope you'll be able to help. We take your data security very seriously and take all possible steps to ensure that your data is protected. All responses will be handled in accordance with instructions from the Icelandic Data Protection Authority.

If you have any questions about the survey

Please do not hesitate to contact us if anything is unclear about your participation in this survey. If you have any questions or require further information about the survey, you are welcome to contact [name], project manager at the Social Sciences Research Institute, by e-mail to [email] or by telephone [number].

Thank you in advance and with hope for a good reception,

[Signature]

[Name]

Director of the University of Iceland Social Science Research Institute

[Institutional contact information]

Figure A8. Sample reminder letter (English version), long text with link in the middle