The SOM Institute's Notes on Survey Methodology – 2025:2

Knock, Knock. Who's there? The Effects of Visual Sender Recognition

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ABSTRACT

In countries where government institutions are held in high regard and are trusted by most people, branding a survey invitation with a government logo may increase the likelihood of the invitation being read. This could, in turn, increase survey participation. In the present studies, the impact on response rates of adding a logo of a local and well-known government authority to a survey invitation was assessed. In three experiments, one group was randomly assigned to receive only the SOM Institute's logo and the other half to receive both the SOM Institute's logo and a government official logo on the envelope of the mailed survey invitations. Results showed that the groups receiving two logos were more likely to complete the questionnaire. Effect sizes varied across the three experiments but were strong enough to generate significance when combined in a meta-analysis. This positive effect on response rate was not at the expense of nonresponse bias. Including a government official logo appears to be an effective, low-cost, and simple method to increase response propensities.

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INTRODUCTION

Survey data plays an essential role in public opinion research. However, the sheer number of different surveys individuals are invited to complete has increased considerably in the last decades. A proposed potential explanation for the continuously decreasing willingness to participate in surveys (Groves, 2006; Kreuter, 2013; Peytchev, 2013; Leeper, 2019) is that individuals become fatigued by the increased number of surveys they are asked to complete, perhaps most commonly market research surveys. Whereas market research surveys tend to be administered by private companies with company-branded invitations, government-branded surveys are less common. Furthermore, in countries where government institutions are held in high regard and trust in institutions is high, such as Sweden (OECD, 2024), branding a survey invitation with a government logo may increase the likelihood of the invitation being read and the survey request being considered.

In the present studies, the impact on response rates of adding a logo of a local and well-known government authority to a survey invitation was assessed. In three experimental treatments, half of the sample persons of three self-administered mixed-mode surveys (paper-and-pencil mail-back and web questionnaire) were assigned to have all mailed invitations and reminders to complete the questionnaire branded with both a government authority logo and the SOM Institute's logo (that is, the logo of the university-based research organization which conducted the survey). The government authority logo would depict either Gothenburg City's official logo, or University of Gothenburg's logo. The other half had all mailed invitations branded with only the SOM Institute's logo.

PREVIOUS RESEARCH ON THE IMPACT OF SENDER RECOGNITION AND SURVEY SPONSORSHIP

Results from previous research indicate that the senders of a survey request

affected the response rate and nonresponse bias (Groves et al., 2012). Whereas survey requests sent with university branded material have been found to increase response rates, survey requests from commercial organizations, such as a market research company, have been found to have adverse effects on response rates (e.g., Edwards et al., 2002; Greer et al., 2000). Furthermore, survey requests sent from a familiar sender or a sender that is local to the sample person's place of residence have been found to increase response rate and decrease nonresponse bias (e.g., Edwards et al., 2014; Ladik et al., 2007; Millar et al., 2021). However, there are also indications that familiar senders do not always increase response rates compared to unfamiliar senders (Brehaut et al., 2006).

Although studies have investigated the impact of sender recognition as well as the effect of different kinds of senders, most studies focus on the sender's signature, the logo in the web survey or the effect of the sender only after the potential respondent has opened the mail. Fewer studies have looked at the relationship between sender recognition and the potential respondent at the very first stage, namely the branding of the envelope. One of the hurdles specific to mailed survey requests is to get the sample persons to open the envelope. The present study, therefore, assesses whether showing the logo of a local familiar government authority increases response propensities. One of the proposed mechanisms to the suggested outcome is that a familiar government logo on the envelope increases the chances of the envelope being opened and the survey request being taken seriously.

HYPOTHESES

RESPONSE RATES

H1. Sample persons who receive envelopes displaying both the SOM Institute's logo and a government authority logo may be more likely to complete the questionnaire than sample persons who receive envelopes only showing the SOM

Institute's logo.

NONRESPONSE BIAS

H2. Sample persons who receive envelopes displaying both the SOM Institute's logo and a government authority logo and who submit the questionnaire may be more similar to nonrespondents in terms of demographics than sample persons who are mailed survey requests with only the SOM Institute's logo visible on the envelopes.

OVERVIEW OF THE STUDIES

The hypotheses were assessed through three preregistered experiments administered in three surveys. The first experiment (Study 1) was performed in a study based on residents in Gothenburg. Half of the sample persons received both the SOM Institute's logo and Gothenburg City's official logo marked visibly in the window of the envelope. The other half only received the SOM Institute's logo. The second experiment (Study 2) was a direct replication of Study 1. The third experiment (Study 3) was a conceptual replication and an extension of Study 1 and 2, and was conducted in the western region of Sweden. Instead of the Gothenburg City's logo, half of the sample persons in Study 3 received both the SOM Institute's logo and the University of Gothenburg's official logo. The other half of the sample persons received only the SOM Institute's logo. See Appendix 1 for illustrations of the logos on the envelopes.

METHODS AND MATERIALS - STUDY 1

PREREGISTRATION

The hypotheses, procedure, exclusion criteria, and analysis plan were preregistered prior to data collection had completed and prior to analyses. The preregistration for Study 1 can be found at https://osf.io/jv53q.

SAMPLE

A sample of 9,000 randomly selected individuals registered by the Swedish Tax Authority as residing in the city of Gothenburg was drawn on August 14, 2023. Only individuals 16-90 years old were invited to complete the questionnaire. The questionnaire was administrated by the SOM Institute at the University of Gothenburg.

PROCEDURE

EXPERIMENTAL DESIGN AND PROCEDURE

Prior to being invited to complete the questionnaire, all sample persons were randomly assigned to one of two experimental groups using random numbers extracted from random.org. Half of the sample persons were randomly assigned to be mailed invitations and reminders with the SOM Institute's logo and Gothenburg City's official logo visible in the upper-left window of the envelope (treatment group) and the other half was randomly assigned to be mailed invitations and reminders with only the SOM Institute's logo visible in the upper-left window of the envelope (control group). The government authority logo depicted the Gothenburg City logo (the city where the survey was administered). It was assumed that inhabitants of Gothenburg would be less familiar with the SOM Institute's logo than with Gothenburg City's logo.

All sample persons were mailed a prenotification postcard one week before the first mailed invitation to complete the questionnaire online. Nine days after the first invitation to complete the questionnaire, all sample persons were mailed another postcard with an envelope in which the person was thanked for their participation and reminded to participate if not yet having done so. Postcards mailed to sample persons in the treatment group displayed the SOM Institute's logo and Gothenburg City's logo at the top of the backside of the postcard, whereas sample persons in the control group received only the SOM Institute's logo. The

postcard included instructions on how to respond to the online self-administered questionnaire.

Sample persons who had not submitted their questionnaire 17 days after the first invitation to complete the questionnaire were mailed a reminder to complete the questionnaire either through a self-administered paper-and-pencil questionnaire or by the online self-administered questionnaire. Sample persons who had not submitted their questionnaire 31 days after the first invitation were sent a text message on their cell phone, reminding them to participate. The text message included a link to the online questionnaire and login details.

Sample persons who had not submitted their questionnaire or had not refused to participate received four mailed reminders with an offer to complete the questionnaire either through a paper-and-pencil questionnaire or by the online questionnaire, and four text messages including a link to the online questionnaire and login details sent to their cell phone (i.e., nine reminders in total). The questionnaire included 65 questions.

METHODS AND MATERIALS - STUDY 2 AND 3

PREREGISTRATION

The hypotheses, procedure, exclusion criteria, and analysis plan were preregistered prior to data collection had completed and prior to analyses. The preregistration for Study 2 and 3 can be found at https://osf.io/udxec.

SAMPLE

A sample of 9,000 randomly selected individuals registered by the Swedish Tax Authority as residing in the city of Gothenburg, and 6,000 randomly selected individuals registered by the Swedish Tax Authority as residing in Western Sweden, was drawn on August 13, 2024. Unlike Study 1, individuals above the age of 16 were invited to complete the questionnaire without an upper age limit. The

questionnaire was administrated by the SOM Institute at the University of Gothenburg.

PROCEDURE

EXPERIMENTAL DESIGN AND PROCEDURE

Study 2 was a direct replication of Study 1. In Study 3, which was conducted in a regional survey of West Sweden, the government authority logo depicted the University of Gothenburg logo instead of the Gothenburg City logo. In this survey, the first postal invitation included the option to respond through a self-administered paper-and-pencil questionnaire or by an online self-administered questionnaire. In Study 3, the total number of questions was 74. Furthermore, the first mailed reminder was sent to the sample persons who had not submitted their questionnaire 28 days after the first invitation. In all other regards, the experimental design and procedure for Study 3 was identical to Study 1. See table 1 for an overview of the experimental groups in each study.

Table 1. *Overview of Experimental Groups*

The SOM-survey in Gothenburg 2023 (Study 1)		**The SOM-survey in Gothenburg 2024 (Study 2)**		**The SOM-survey in West Sweden 2024 (Study 3)**	
The SOM Institute and Gothenburg City logos	The SOM Institute logo only	The SOM Institute and Gothenburg City logos	The SOM Institute logo only	The SOM Institute and University of Gothenburg logos	The SOM Institute logo only
n = 4,504	*n* = 4,496	*n* = 4,530	*n* = 4,470	*n* = 3,023	*n* = 2,977

ANALYSIS PLAN

RESPONSE RATE

To compare response rates, Response Rate 1 (RR1) was estimated according to the guidelines of the American Association for Public Opinion Research (AAPOR,

2023). Only sample persons who answered 80% or more of the eligible questions were considered a response. The parameters of an OLS regression equation predicted the difference in RR1 between the treatment and control groups.

NONRESPONSE BIAS

Nonresponse bias was assessed through R-indicators. The R-indicator is an expression of the standard deviation of probabilities of responses of units. The R-indicator is an expression of the standard deviation of probabilities of responses of units (Schouten, Cobben & Bethlehem, 2009). This data considered sample persons' sex, age cohort (18-29, 30-39, 40-49, 50-64, 65-74, and 75-90)[1], marital status (married, not married), and birth country (born in the Nordics, not born in the Nordics but born in Europe, and born outside Europe)[2]. The higher the value of the R-indicator, the better representativity among respondents.

RESULTS

RESPONSE RATE

In Study 1, sample persons who were mailed letters with the additional Gothenburg City logo displayed on the envelopes were more likely to complete the questionnaire (RR1 = 45.0) than sample persons who were mailed letters with only the SOM Institute's logo (RR1 = 42.2; Δ = +2.77%, b = 0.03, SE = .01, p = .008).

In Study 2, 43.7 percent of the sample persons who received mailed letters with the additional Gothenburg City logo displayed on the envelopes, completed the questionnaire. This was directionally more than the 42.2 percent who completed it

[1] Sample persons above the age of 90 were excluded from the analysis to ensure that Study 2 and 3 were direct replications of Study 1.

[2] In the preregistration of Study 1, this variable was defined as "born in the Nordics/not born in the Nordics" but in the preregistration of Study 2 and 3 as "born in the Nordics, not born in the Nordics but born in Europe, and born outside Europe". The variable definition for Study 2 and 3 was used in this note on survey methodology.

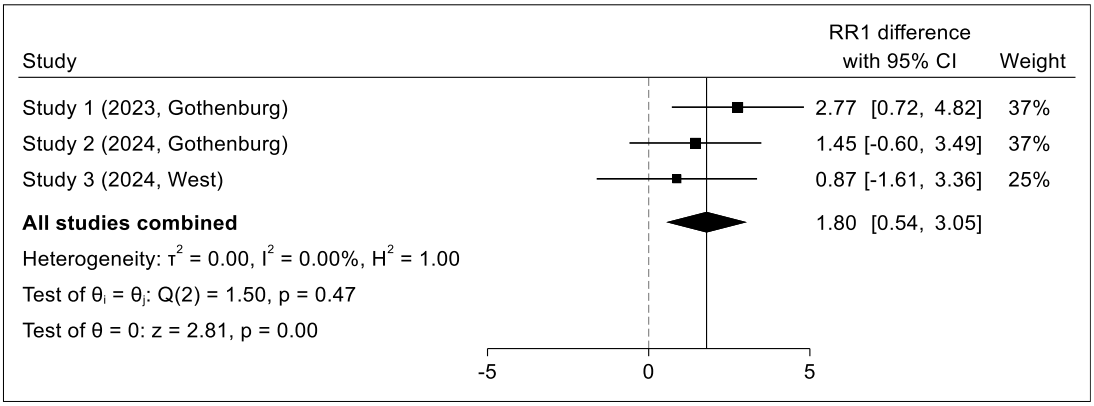
when only receiving the SOM institute's logo, albeit not statistically significantly so (Δ = +1.4%, b = 0.03, SE = .01, p = .165).

Similarly, of the sample persons in Study 3 who were mailed envelopes with the additional University of Gothenburg logo visible, 41.3 percent completed the questionnaire. This response rate was directionally greater than, but not statistically significantly different from, the 40.4 percent who completed it when only receiving the SOM Institute's logo (Δ = +0.9%, b = 0.01, SE = .01, p = .491).

Exploratory analyses in Study 1, 2 and 3 displayed that sex, age, marital status, or birth region did not affect the response propensity among those receiving two logos displayed on the envelope compared to the groups only receiving the SOM Institute's logo on their envelopes.

Despite the lack of a significant effect in Study 2 and 3, when performing a meta-analysis on the three studies combined, adding a government authority logo (being either the Gothenburg City logo or the University of Gothenburg logo) statistically significantly increased response rates overall (Δ = +0.9%, CI[.51, 3.05]) (Figure 1). In addition, the heterogeneity test statistics suggest that the effect's size did not vary significantly between the three administrations of the experiment (Q(2) = 1.50, p = .47) and that none of the variation appeared caused by heterogeneity of the logo's effect on response rate (I^2 = 0.00%).

Figure 1. *Results of meta-analysis, Study 1, 2 and 3*



NONRESPONSE BIAS

Despite increasing response propensities in Study 1, increasing the sender recognition by including the Gothenburg City logo in addition to the SOM Institute's logo in the envelope did not decrease nonresponse bias. Respondents in the two logos group were not more similar to nonrespondents (R-indicator = .67, 95% CI[0.64, 0.70]) than respondents in the one logo group (R-indicator = 0.70, 95% CI[0.67, 0.73]) (with overlapping confidence intervals) (see Table 2). In Study 2, respondents in the two logos group were again not more similar to nonrespondents (R-indicator = .68, 95% CI[0.66, 0.71]) than those in the one logo group (R-indicator = .68, 95% CI[0.65, 0.70]). The same non-effect was observed in Study 3 (R-indicator$_{\text{two logos}}$ = .67, 95% CI[0.64, 0.70]; R-indicator$_{\text{one logo}}$ = .66, 95% CI[0.63, 0.69])

Table 2. *R-indicators and 95% CI*

		R-indicator	Confidence intervals
Study 1 (The SOM-survey in Gothenburg 2023)	The SOM Institute and Gothenburg City logos	0.67 (.01)	[.64, .70]
	SOM Institute logo only	0.70 (.01)	[.67, .73]
Study 2 (The SOM-survey in Gothenburg 2024)	The SOM Institute and Gothenburg City logos	0.68 (.01)	[.66, .71]
	SOM Institute logo only	0.68 (.01)	[.65, .70]
Study 3 (The SOM-survey in West Sweden 2024)	The SOM Institute and University of Gothenburg logos	0.67 (.02)	[.64, .70]
	The SOM Institute logo only	0.66 (.01)	[.63, .69]

Note. Standard errors in parentheses.

CONCLUSION

The meta-analysis showed that including both the SOM Institute's logo and an additional government authority logo statistically significantly increased response rates, without affecting nonresponse bias.

In the three studies, the additional logos used were Gothenburg City's and University of Gothenburg's official logos. It is likely that the individual sample person's knowledge of, relation to, or attitude towards the authority which logo or logos were depicted affects their propensity to open the postal envelope and complete the survey. As seen in the results, sample persons from Gothenburg were slightly more strongly affected by seeing the Gothenburg City logo than what sample persons from all of west-Sweden were by the University of Gothenburg logo. This might be caused by a higher level of recognition for the city one lives in, than to a university located in your region. Future studies could, more thoroughly, assess how different types of authority logos in different regions can affect response propensities. Nonetheless, including a government official logo appear to be an effective, low-cost, and simple method to increase response propensities.

However, no manipulation check was conducted in the presented studies. It was, therefore, assumed based on theory but not concluded statistically that sender recognition may indeed be the confounding factor that increased response rates. Future studies could include a measurement of the sample persons' recognition of the attached logo(s) in order to confirm if sender recognition is a confounding factor, or if there could be other explanations for the increased response rate.

Lastly, the treatment groups were sent two logos and the control groups only one. It is not certain whether it was the inclusion of a second logo in general or the inclusion of the specific government authority logos per se which made sample persons more likely to complete the survey. However, the SOM Institute's logo is mandatory to include on the postal envelope for the sake of transparency. Nonetheless, the number of logos sent to the treatment groups (2) and the control groups (1) is important to keep in mind if the results from the three studies described in this paper are to be applied in other contexts.

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APPENDIX 1 – ILLUSTRATION OF LOGOS

Illustration 1. *Envelope window for the control groups with one logo displayed*

Illustration 2. *Envelope window for the treatment groups in Gothenburg (2023 and 2024) with two logos displayed*

Illustration 3. *Envelope window for the treatment group in West (2024) with two logos displayed*

The SOM Institute is an academic organization located at the University of Gothenburg, Sweden. Since 1986 the SOM Institute conducts annual cross-sectional surveys among the Swedish population with a focus on Society, Opinion, and Media, as well as administering the web panel called the Swedish Citizen Panel. The annual surveys and the web panel both function as infrastructures, enabling researchers and public organizations to effectively collect research and opinion data in collaboration with researchers at the SOM Institute.

In order to strengthen contemporary research on Swedish society, as well as to contribute to international methodological development, the SOM Institute frequently publishes notes on methodological research. These are made available for scholars and the public alike at https://www.gu.se/en/som-institute/publications/research-on-survey-methodology

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