Improving response rates in web surveys with default setting

The effects of default on web survey participation and permission

Liyin Jin  
School of Management, Fudan University

Researchers are increasingly using internet instruments such as email and online surveys as data-collection methods. However, web survey response rates are fairly low, which threatens the efficiency of web surveys. To use web surveys to gather data effectively, it is thus critical to improve the response rate of participants without compromising the low-cost advantage of this approach. The goal of this study is to explore the effects of default settings on consumers’ web survey participation with a series of online field experiments. The findings are as follows. First, default settings affect respondents’ choice of online survey participation. Compared with the ‘no default’ condition, nearly 25% more respondents chose to take a longer survey when ‘taking longer survey’ was set as the default option. Second, survey length influences respondents’ willingness to participate in a future survey. Respondents who took longer surveys were more likely to accept an invitation to participate in a future survey. Third, default settings and survey length create a significant interaction effect that drives participation. Default effects are stronger when respondents have participated in a short survey instead of a long one. Finally, in the context of a web-based survey, default settings change both consumer participation and email invitations permission rates due to the ‘trade-off aversion’ principle.

Introduction

In recent years, with the upgrading of network technologies, researchers have developed and improved online survey techniques to collect data quickly at a relatively low cost on the internet (Roztocki 2001). In contrast
to conventional methods of data gathering, such as face-to-face interviews, direct mailing and telephone interviews, web surveys are superior because they are convenient to complete, can include a wide range of questions on a variety of subjects, and provide a high level of information and interactivity (Ilieva et al. 2002; Cobanoglu & Cobanoglu 2003).

However, internet-based surveys also have disadvantages. First, respondents to web surveys are obviously restricted to internet users, leading to the absence of non-internet users’ responses, and hence less representative conclusions due to the limited sample (Lozar Manfreda et al. 2008). Second, the results of a meta-analysis based on 45 surveys (such as web surveys, telephone surveys, fax surveys, direct mailing and face-to-face interviews) by Lozar Manfreda et al. (2008) show that response rates for web surveys averaged 6–15%, which is 11% lower than those of other methods. Third, web surveys suffer because respondents often terminate before answering all of the questions, especially when presented with long questionnaires with difficult questions. Among the three possible disadvantages mentioned above, the representativeness of respondents is predicted to improve to some extent with increasing access to the internet by the public. However, greater challenges are expected in enhancing participation rates by attracting web users despite an increasingly complicated information environment exacerbated by overwhelming amounts of spam emails and more online surveys of all sorts.

Since the 1970s, scholars have shown great interest in the issue of improving response rates to surveys. Earlier research findings were centred on the function of monetary incentives, concluding that pay more, get more, but it costs much more as response rates increase (Chromy & Horvitz 1978). Later research shows that the response rates to a particular web survey will decrease by 7.4% with an increase in the length of the questionnaire, and increase only slightly (by 2%) with changes in types of incentive (e.g. lucky draw, prizes), follow-up emails and improvements in presentation of the questionnaire (Deutskens et al. 2004). In terms of costs incurred by improving response rates – despite the distinct advantages of web surveys over traditional data-gathering methods – it is still impossible to strike a better balance between efficiency and effectiveness because a survey done online seems to cost more than offline: an extra $30 will be spent to increase the rates by a tiny 1% (based on the benchmark of a lottery incentive web survey with 300 valid responses) (Cobanoglu & Cobanoglu 2003).
Despite the increased use of web surveys, major obstacles in further development still exist concerning the limited length of the questionnaire, the lack of in-depth information and relatively low participation rates. Meanwhile, rather than encouraging a significant increase in response rates (Comley 2000; Bosnjak & Tuten 2003), traditional facilitators such as lotteries, vouchers and other monetary incentives play a negative role in terms of the quality of data collected (Göritz 2004). Consequently, it is important to determine how to improve the participation rates of respondents by a large margin while maintaining the advantages of the web survey in comparative costs.

One important approach to affect web survey response rates is default setting. Defaults are predefined choices that will become effective if decision makers do not take action to change them. In many situations, it would not be problematic in a fully rational world that marketers, employers and policy makers set default options, since people would not stay with defaults that do not correspond with the best option for them (Thaler & Sunstein 2003). However, recent research has shown that defaults have the power to influence individual behaviour in a wide range of settings, such as organ donation decisions (Johnson & Goldstein 2003), car option purchases (Park et al. 2000) and consent to receive email marketing (Johnson et al. 2002).

In the context of the web survey, a default option can be set intentionally by researchers. For example, researchers can set ‘participating in a longer survey’ (or a shorter one) as the default when respondents are faced with invitations to both longer and shorter web surveys simultaneously (with different levels of incentive), and then ask respondents to make their choice. Does this kind of default setting influence respondents’ survey participation behaviour? Will different default options produce different levels of response rate? In this paper, we examine the effects of default settings on web survey participation with a series of online field experiments (conducted in China). Experiment 1 concentrated on the possible influences of defaults in response to web surveys with varied lengths. We designed Experiment 2 to further explore the effects of default setting on respondents’ permission to receive invitation emails from researchers to participate in an upcoming online survey. Finally, Experiment 3 focused on the underlying process of the effects of default settings on online survey participation.
Literature review

Determinants of web survey participation

Web survey participation is basically subject to the respondent, survey design and interviewer as well as social context. The four determinants mentioned above were summarised on the basis of generalisation of traditional survey methods in conducting sociological research by Biemer and Lyberg (2003), where participation rates were shown to rise along with improved interactions between interviewers and respondents, as well as tightened control over the questionnaire design. In an online survey, respondents are basically facing self-administered questionnaires with the absence of essential interactions with interviewers, a situation that requires a higher level of self-motivation by respondents (Fricker et al. 2005; Lozar Manfreda et al. 2008). Consequently, factors regarding survey design and respondents themselves serve as key determinants in the participation rates for web surveys. Deutskens et al. (2004) showed that the length and presentation style of the questionnaire can greatly influence participation rates, noting a difference of 8% between long and short surveys, as well as a margin of 2% of the response rate with pure text questionnaires over that of surveys that included visual elements (e.g. images and pictures). In terms of the characteristics of the respondents, respondents’ experience in using the internet (Miller et al. 2002; Grigorian et al. 2004), cultural values and privacy concerns will all impact their participation in online surveys (Sax et al. 2003).

However, recent years have seen a growing concern about risks incurred by web surveys, resulting from problems of online fraud, hacker attacks and personal information theft. A recent study on factors that influence consumers’ online disclosure of personal information revealed that monetary incentives and/or customised service are of negligible effectiveness (Ward et al. 2005). Furthermore, Andrade et al. (2002) suggested a third approach to stimulate consumers’ online self-disclosure by improvement in privacy policies, enhanced corporate reputation and incentives offered in some way. This study demonstrated that the former two approaches encourage consumers’ self-disclosure, while the latter has negative influences.

Theoretical interpretations of respondents’ psychological processes during survey participation can be developed within the research frameworks of social exchange theory (Dillman 1991) and persuasion theory (Groves et al. 1992). Social exchange theory, which resembles the reciprocation principle among the six psychological principles generalised by Groves et al. (1992), suggests that low levels of participation in surveys can be attributed
to respondents’ belief that incentives offered by researchers cannot compensate for their time spent and efforts made. Therefore, participation can be improved by strengthening the stimulus through use of incentives, or by persuading respondents into believing that the current research is beneficial to them. The commitment and consistency principle suggests that the likelihood of participation can be greatly enhanced if the topic of the survey is consistent with respondents’ beliefs, attitudes or values; the social validation principle notes that respondents tend to be more likely to become involved when they are aware that others are cooperating; the scarcity principle claims that respondents are more likely to participate when they believe that only a small fraction of people (e.g. one in 100,000) have access to such a survey in a short period of time (e.g. only available this week). According to the principles of authority and liking, respondents will be more willing to participate in a survey conducted by legitimate and authoritative agencies (or personnel), or invited by people who are similar or attractive to them (Biemer & Lyberg 2003).

In summary, participation in surveys is influenced by both the respondents’ individual characteristics such as self-awareness, concerns about privacy, previous experiences and beliefs, and diversified external factors such as the reputation of research institutions, incentives, observable behaviours of others, persuasion skills of researchers and prior permission of invitation to participate. Apart from the possible factors listed above, low levels of participation in online surveys can result when the following situations occur: first, a high level of concern and anxiety about disclosure of personal information on the internet (Lozar Manfreda et al. 2008) and distractions leading to avoidance or neglect of web survey invitations (Crawford et al. 2001); second, the absence of one-to-one communication and personal attention due to the shortcomings of the internet in terms of interpersonal interaction and involved conversations (Vehovar et al. 2001); and, finally, the greater effort that respondents expect to make in completing online questionnaires compared to face-to-face interviews and telephone surveys (Fricker et al. 2005).

**The influence of default settings in web survey participation**

Internet users tend to have positive attitudes about emails whose delivery they have granted and accepted beforehand, and are more likely to direct other emails into their spam mailbox (Tezinde et al. 2002). Therefore, to enhance the participation rate, it is extremely helpful to get the permission of respondents before sending email invitations to an online survey. At present,
Improving response rates in web surveys with default setting

There are basically two ways to get internet users’ permission—namely, opting-in mode and opting-out mode (Johnson et al. 2002; Eastlick et al. 2006). According to the European Union Data Directive (European Union 1995), a consumer must opt in to any programme that collects personal information such as demographics or purchase and clickstream histories. By opting in, they must give their explicit consent to a set of rules that govern the way the information can be used, traded or sold. In contrast, the policy in the US takes no formal stand on consumers’ needed consent and the most common practice among internet sites appears to be an opt-out policy, requiring the consumer to make an explicit request not to be included in a programme that collects personal information (Johnson et al. 2002).

The essential difference between the two modes lies in their different default. In the opting out mode, the default allows websites to use customers’ personal information, and customers will act correspondingly (e.g. by changing their options or filling in the blank) to opt out if they do not want the information used. On the other hand, the opting-in mode sets disapproval of disclosure of users’ information as the default so that users have to agree if they want to make their information available.

Existing research shows that differences in default settings will make a difference in decision makers’ choices. In Johnson and Goldstein’s (2003) study, people’s organ donation rate was 42% when ‘disapproval of donation’ was set as the default, and yet the study reported a sharp increase to 82% when the default was set as ‘approval’. In another study, Goldstein et al. (2008) found that consumers’ average willingness to pay for customised products (custom add-ons for automobiles) showed an increase of nearly $1500 in the opting-out mode with high-end configuration set as the default compared to that in an opting-in customisation mode in which the basic configuration was set as the default; this means that different default settings will significantly shift customers’ preferences in the context of automobile customisation. A recent study shows that the default effect (i.e. people will take no action and simply accept the default) applies to the choice of pension plans (Carroll et al. 2009) as well as to the purchase of environmentally friendly products (Pichert & Katsikopoulos 2008).

In most decision-making situations, a default option can be set intentionally. In this case, the final choice of the decision maker will be changed (more likely to accept the option set as the default) when the default setting changes, which, in essence, deviates from the characteristics of rational behaviour predicted by standard economics theory. The inclination towards doing nothing as far as acceptance of the default option is concerned might result from the following aspects. First, decision
makers might not pay attention to the existence of a default or the unwillingness to make more effort to take action (i.e. to go to the trouble of changing the default option). Compared to the direct acceptance of the default option, the action of choosing the non-default option takes much more initiative, which requires relatively more thinking to actively form an opinion and report such a preference (Bettman et al. 2008). Moreover, the negative emotions led by the trade-off among all possible options will probably result in decision makers’ inclination towards trade-off aversion in the dilemma of the choice-making process (Hedgcock & Rao 2009), which can still be avoided with a default alternative.

Second, since the default is taken as a sort of status quo, the action of giving it up will lead to the loss of such a status, which will activate individuals’ loss aversion in the decision-making process, resulting in their intention to maintain the situation as it stands (Kahneman & Tversky 1979), hence their unwillingness to opt out.

Third, as a sort of perceived endorsement, recommendation or advice offered by providers, the default option implies that the ‘preference and choice by the majority’ and the ‘optimised’ decision will be made (McKenzie et al. 2006).

Fourth, as the justification heuristic, the default option is intended to offer ‘a reason to choose’ in the complicated decision-making process, especially when related expertise is required (Dhar & Knowlis 1999; Iyengar & Lepper 2000).

As a result, it can be predicted that, in the context of web surveys, different default settings will make a difference in respondents’ participation in the survey. Specifically, the intentionally set default option will possibly shift respondents’ choice of whether or not to accept the invitation to the survey and also influence their participation behaviour. For example, more respondents will choose to take a longer survey when ‘participating in a longer survey’ is set as the default, and the permission rate will rise considerably when the default option is set as ‘allowing researchers to send inviting email inviting participation in the next survey’. Furthermore, it is not accurate to explain the underlying process of the effects of the default setting from the perspective of ‘loss aversion’ or ‘perceived recommendation’ by assuming that the decision of whether or not to take the online survey is nothing but a simple ‘altruistic’ choice requiring no sophisticated expertise. Rather, it is assumed that, in the case of web surveys, the influence of default settings involved in the participation behaviour of respondents lies in their decision cost-saving feature during the process of trade-off among all alternatives by the decision makers.
Experiment 1

Experiment design, procedure and respondents

Existing researches show that participation rates in web surveys are negatively correlated with the length of the questionnaire, and respondents are more willing to take a relatively shorter survey (Deutskens et al. 2004). Therefore, it is exceptionally difficult to increase the participation rates in a long, time-consuming web survey. In this experiment, we attempted to analyse the influence of default settings in respondents' participation rates when they were faced with invitations to both longer and shorter web surveys (with different levels of incentives) simultaneously, in effect defining the role of the intentionally set default in encouraging respondents to take longer surveys.

The experiment used a single-factor between-subjects design. We manipulated the factor of default setting across three levels. The no-default condition was manipulated to let respondents freely choose between ‘longer’ and ‘shorter’ surveys without any default setting. Respondents taking the longer survey by the default condition chose the longer survey, which was set as a default option, while those taking the shorter survey by default condition took a shorter survey, also by default.

A pretest was conducted among 50 selected students to design equivalently attractive options for respondents in which a presumed context was given:

One is a shorter survey with a probability of 26% to win a lottery (the prize is one-year complimentary subscription of an e-magazine), while the other is a longer one under the same topic which is equivalent to the former one in attractiveness with a winning probability of 62%.

The results showed that the average probability was 62% given by the 50 participants, which means that the ‘cost/utility ratio’ is basically equivalent between the options of ‘shorter survey/a winning probability of 26%’ and ‘longer survey/a winning probability of 62%’. On the basis of such a pretest, we listed the two options above for the respondents in Experiment 1 with the prize of ‘one-year free subscription of an e-magazine’.

We selected 1800 members randomly from a networking website’s database, who were randomly divided into three groups (600 members for each). An email invitation message was sent to the members, along with a covering letter and the website address (URL) for the survey. A unique website address was created for each respondent with the help of a common
gateway interface (CGI) protocol. Thus, the responses were tracked and the possibility of a response from a non-sample source eliminated. The internet protocol (IP) numbers were obtained, along with the time and date the survey was completed by the respondent. Also, another CGI script was used to eliminate multiple entries by the same person.

Respondents were supposed to choose between a longer and a shorter survey by clicking on the link in the invitation email. Respondents in the no-default condition had to choose whichever option they favoured, while those in the latter two conditions could either change the default option or do nothing and simply skip that choice (which means acceptance by default). After making their choices (or skipping directly), they would begin to respond to the questionnaire.

Results

The web survey used for Experiment 1 lasted for four weeks, during which 284 participants completed the whole questionnaire at an overall response rate of 15.78%, among whom there were 87, 102 and 95 participants from each of the three conditions at a response rate of 14.50%, 17% and 15.83%, respectively. The results of ANOVA show no significant difference in internet use experience (F(2,281) = 0.230, p > 0.1), previous survey-taking experience (F(2, 281) = 0.555, p > 0.1) or between genders, with separate male participant percentages of 52%, 46.7% and 45% (χ²(df = 2) = 3.027, p > 0.1) among the three groups. The post-experiment sampling interview revealed that none of the participants had awareness of the experimental nature of the survey they took.

The results of Experiment 1 are shown in Figure 1. Those respondents who chose the longer survey comprised 56.3%, 81.4% and 42.1% in the three conditions. A total of 56.3% chose to take the longer survey in no-default condition, which is not a statistically significant difference from 50% (the neutral position). However, the proportion of longer survey by default condition reaches a noticeable 81.4% with a significant margin over the other two (compared to the no-default condition: χ²(df = 1) = 5.178, p < 0.05; compared to the shorter survey by default condition: χ²(df = 1) = 9.681, p < 0.001). Also, a significant difference was shown between those who took the longer survey in the no-default condition and those who took the shorter survey in the default condition (χ²(df = 1) = 3.293, p < 0.1).

These results suggest that, compared to a default setting with a shorter survey being prioritised, the longer survey by default setting will sharply increase the percentage of participants taking the longer survey by 39.3%,
which also rises by 25.1% compared to the no-default condition. That is, the default setting did make a difference in participants' choices in that the proportion of participants choosing to take the longer survey in the longer survey by default condition was twice that of the shorter survey by default condition, which preliminarily supports the prediction of the default setting effect.

**Experiment 2**

**Experiment design, procedure and respondents**

Experiment 2 was designed to examine the effects of default settings on respondents' permission behaviours. Existing research findings show that internet users will have positive attitudes towards permitted emails and are more likely to tag those that are not as spam email, with an explicit negative attitude (Tezinde *et al.* 2002). Therefore, it is evident that the pre-permission of respondents to invitations will greatly facilitate the conducting of web surveys. So it is expected that respondents would be more likely to have a positive attitude towards a web survey with pre-permission to invitation emails by researchers, and hence there would be a higher participation rate.

A 2 (longer survey vs shorter one) × 3 (no-default vs permission by default vs no permission by default) between-subjects design was employed. The two options of longer and shorter surveys offered on the
website allowed participants to self-select to create groups according to different lengths of survey. The opportunity to set the default occurred at the end of the questionnaire on such surveys with an option of whether or not to accept invitation emails for upcoming surveys. Participants were free to choose between 'yes' and 'no' in the no-default condition, while those in the other two conditions were asked to choose between changing the default option or simply skipping it, with the options of 'yes' and 'no' respectively set as defaults.

In Experiment 2, a total of 2400 members of a networking website were selected and divided randomly into six conditions (400 in each), and the members all received an invitation email directing them to choose between longer (at a winning probability of 62%) and shorter (at a winning probability of 26%) surveys to be taken, which finally led them to the option of whether or not to accept the invitation to participate in the next survey. Identical topics and items were developed in both surveys at different lengths to avoid the possible influence of survey contents on participants' permission behaviours.

Results

This experiment lasted for four weeks, during which 376 participants completed the entire task with an overall response rate of 15.67% and respective rates varying 13.8% to 17.4%. The results of ANOVA showed no significant difference among the six conditions in internet use experience ($F(5, 370) = 0.166, p > 0.1$), web survey participation experience ($F(5, 370) = 0.247, p > 0.1$) or gender, with male participants' proportions ranging from 47.4% to 52%, respectively, in all six conditions ($\chi^2_{(df = 5)} = 1.045, p > 0.1$). Participants also were not aware of the hidden experiment when completing the questionnaire.

The data analysis results of Experiment 2 are illustrated in Figure 2. First, a total of 53.1% chose to take the longer survey, which is similar to Experiment 1 (56.3%) without significant difference from 50% ($\chi^2_{(df = 1)} = 0.827, p > 0.1$). Second, the length of the survey made a significant difference in participants' choice of whether or not to allow emails inviting them to participate in the next survey ($\chi^2_{(df = 1)} = 4.078, p < 0.05$) in that, compared to those who took the shorter survey (permission rate = 42.27%), those who took the longer survey were more willing to permit invitation emails for the next survey (permission rate = 55.93%). This is probably because people who dislike surveys were more likely to choose the short survey, and then more likely to say no to future surveys.
Improving response rates in web surveys with default setting

The effect of the default setting on permission-granting behaviours was also observed ($\chi^2_{(df = 2)} = 5.284, p < 0.1$) in that the real permission rate reached 62.5% when allowing invitations ('yes' option) was set as the default. This is significantly higher than that of the no-default condition, with a permission rate of 35.9%, and that of the no-permission by default condition, with a permission rate of 48.95% as well.

Third, it is critical to note the significant interaction effect between length of survey and default setting. For example, in the case of the permission by default condition, no significant difference was found between the permission rates of longer and shorter survey takers. A sharp increase in permission rates among longer survey takers can be attributed to the condition of no permission by default. Higher rates among longer survey takers are also observed in the case of the no-default condition, which resembles the results of the no permission by default condition.

To summarise, there is no difference in conditions with varied default settings in terms of permission-granting behaviours if respondents chose to take a longer survey ($\chi^2_{(df = 2)} = 2.225, p > 0.1$), while a significant difference is detected if respondents chose a shorter one ($\chi^2_{(df = 2)} = 4.977, p < 0.05$). These findings imply that the default setting will improve the permission rates for those shorter (easier) survey takers.

According to the consistency principle (Cialdini & Guadagno 2004), respondents who take longer web surveys, in comparison to choosing shorter surveys, have spent much more time and made greater efforts to
cooperate. This in turn forms a stronger psychological commitment and motivation to maintain respondents' behavioural consistency, leading to fewer disturbances when choosing whether or not to accept invitation emails for a future survey.

**Experiment 3**

In Experiment 3, we attempted to examine the underlying mechanism of default-setting effects in the context of web surveys. The psychological process in which respondents' behaviours are affected by default settings can be interpreted from three perspectives - namely 'inattention', 'trade-off aversion (saving psychological cost)', 'loss aversion' and 'perceived recommendation/advice/optimised option' (Johnson & Goldstein 2003; Goldstein *et al.* 2008; Carroll *et al.* 2009).

In the context of the current study, the missing link between the decision to be made and respondents' perceived benefits will lead to no great risk in the case of an unwise choice; thus, the loss aversion explanation does not apply here because of lack of logical foundation. In addition, elaborate information processing involving the work of the cognitive system is required when associating the default setting with the recommendation (or advice)/preference by the majority of respondents. However, in the current experiment, most respondents were involved in the web survey at a low level without sufficient motivation to form an explicit link between the default setting and recommendations, advice or preferences by the majority or of forming ideas for an optimised option. Moreover, no expertise is required in the choice-making and permission-giving process in the context of a web survey-taking decision where it is easy for decision makers to choose among all possible options.

Therefore, we argue that, to change consumers' participation and permission rates in a web survey context, the default setting might function in two ways: (1) the lack of knowledge of its existence by respondents (inattention), which leads to consistency of their choice of the default option; and (2) decision cost savings as a trade-off among various alternatives (trade-off aversion). We tested the prediction in Experiment 3, as follows.

**Experiment design, procedure and respondents**

In Experiment 3, we adopted a single-factor between-subjects design in which, after finishing a web survey, participants were asked to respond to
the question of ‘whether or not to allow the sending of inviting emails if follow-up surveys are available’, with options of ‘yes’, ‘no’ or ‘whatever (do not care)’. Participants were divided into those representing four conditions randomly, three of which were given the options with each different one set as the default, respectively (i.e. permission by default, no permission by default and whatever), where participants were able to choose from skipping the questions (which means taking the default option) or choosing a non-default alternative. However, in another condition without default (i.e. no-default condition), participants were asked to make a direct choice on their own initiative among the three options before they submitted the questionnaire.

Invitation emails were delivered to the four randomly formed groups of 1600 members of a networking website (400 in each) asking them to respond to the question of ‘whether or not to allow the sending of inviting emails if follow-up surveys are available’ after completing the questionnaire (identical contents were given to all of the four groups) by skipping or choosing.

The experiment lasted for four weeks, during which time 227 participants completed the whole survey at an overall response rate of 14.19% with respective rates ranging from 12.5% to 16.75%. The results showed no significant difference among the three conditions in internet use experience ($F(3,223) = 0.113, p > 0.1$), web survey participation experience ($F(3,223) = 0.352, p > 0.1$) or gender, with male participants’ proportion ranging from 40.0% to 53.6%, respectively, in all four conditions ($\chi^2(\text{df} = 3) = 1.826, p > 0.1$). Participants were also not aware of the hidden experiment when completing the questionnaire.

Results

In the context without default option, respondents choosing ‘yes’, ‘no’ or ‘whatever’ comprised 9%, 39% and 52%, respectively (see Figure 3). Compared to the proportion of ‘permission’ among conditions in Experiment 2, the explicitly stated option of ‘whatever’ in the current case lowers the percentage of participants choosing a pronounced ‘permission (yes)’, which implies deliberate weighing of all of the alternatives including the default instead of simply ignoring the default option. Therefore, the interpretation of inattention can basically be ruled out.

After comparative analysis of the final permission rates among the no-default, ‘yes’ as default and ‘no’ as default conditions, it is obvious that the existence of the default option or different settings by default
Figure 3 Effect of default setting on participants' choices in Experiment 3

make no difference in participants’ final decision of whether or not to allow invitation emails ($\chi^2_{(df = 2)} = 0.217, p > 0.1$). Furthermore, approximately 50% of participants among the three conditions chose the option of ‘whatever’, which, to some extent, implies ‘avoidance of choice’, which leaves the right of decision-making to the researchers instead of participants making their own choices. In other words, the availability of ‘whatever’ also helps to save decision-making costs in trade-off among various options by participants. As a result, nearly 50% of all participants chose the ‘whatever’ option in an attempt to avoid trade-off, which reduces sharply the effect of the default option (without significant influence in respondents’ choices).

In the ‘whatever’ by default condition, nearly 72.0% of participants chose that option at a significantly higher rate than the other three conditions (compared to no-default condition: $\chi^2_{(df = 1)} = 6.830$; compared to ‘yes’ as the default condition: $\chi^2_{(df = 1)} = 7.945$; compared to ‘no’ as the default condition: $\chi^2_{(df = 1)} = 7.311; p < 0.05$), whereas the proportion of those who chose ‘no permission’ was at significantly low rate of 22.0% ($\chi^2_{(df = 1)} = 5.618; \chi^2_{(df = 1)} = 6.824; \chi^2_{(df = 1)} = 7.061; p < 0.05$). However, 6% of participants chose ‘permission’, which is significantly lower than that of permission by default condition ($\chi^2_{(df = 1)} = 4.879, p < 0.05$) without significant difference among those of the other two conditions ($\chi^2_{(df = 1)} = 0.650, p > 0.1$).

The results above mean that the default option of ‘whatever’ discourages the trade-off intention of participants in the decision-making process, which further implies that the resonance between the availability of ‘default’ and
the alternative of ‘whatever’ remarkably diminishes participants’ trade-off for a possible ‘optimised’ choice by taking the ‘whatever’ option as the default.

## Conclusions

### Major findings and discussion

Previous work on the influencing factors of rates of web survey participation has examined how response rates to web surveys are lower than those to other data-collection methods, as well as the effects of length and style of presentation of the questionnaire, respondents’ experiences and monetary incentives (e.g. Ilieva et al. 2002; Cobanoglu & Cobanoglu 2003; Deutskens et al. 2004; Lozar Manfreda et al. 2008). However, this is the first study we are aware of that examines how default settings affect respondents’ web survey participation and permission to accept invitations. Our study suggests that different default settings in the opting-in and opting-out modes will make a difference in respondents’ participation and permission in web surveys. We also predict that, in the context of web-based surveys, for changing consumers’ participation and permission rates, default works due to the ‘trade-off aversion’ principle.

The experimental results are as follows. First, default settings will change respondents’ participation in web surveys. The proportion of those who took the longer survey increased sharply by 39.3% in the ‘longer survey’ by default condition compared to that of the ‘shorter survey’ by default condition, and even increased by 25.1% in the no-default condition (Experiment 1).

Second, the length of the survey does make a significant difference in respondents’ choice of whether or not to allow emails inviting them to participate in a subsequent survey in that those who take longer surveys are more likely to permit an invitation email for the next survey compared to those who take shorter surveys (Experiment 2). This is probably because longer survey takers have spent much more time and made greater effort to cooperate, which in turn creates a stronger psychological commitment and motivation to maintain their behavioural consistency. Another possibility is that people tolerant of surveys were perhaps more likely to choose the longer surveys and more likely to choose future surveys.

Third, the previous experience of participating in a longer survey will enable respondents to deviate from the default setting in choosing whether or not to allow invitation emails, while such settings will significantly influence respondents’ attitudes towards receiving emails for a future
survey if they took a shorter survey in the past (Experiment 2). In other words, default settings can effectively shift respondents’ inclination to participate in the following survey after completing a shorter (easier) one.

Finally, in cases where the option of ‘whatever’ is available, the default setting will make no difference in respondents’ choice of whether or not to accept invitations, which, indirectly, serves as an instrument to reveal the underlying mechanism of default settings in influencing respondents’ participation in web surveys (Experiment 3). This is because, in such contexts, the default option leads to a choice in accordance with its content, not because of respondents’ inattention to the existence of the default option but due to trade-off aversion.

The research findings above shed light on the following aspects of web surveys. First, they demonstrate the significant influence of default settings on individual decision making in the context of the web survey participant, which further extends related theory in terms of default effects.

Second, existing researchers have proposed various theoretical explanations for the psychological aspects of default effects (e.g. inattention, loss aversion, trade-off aversion and minimisation of decision-making cost, perceived recommendation). This study offers evidence that, in the context of web survey participation and permission-granting decision making, the underlying mechanism of default settings in respondents’ choices lies in the saving of decision-making costs rather than inattention to the existence of such a default, which also demonstrates indirectly the universal trade-off aversion among decision makers.

Last but not least, it is found that default-setting effects depend on the length of the survey – the longer the survey, the weaker the default effects. One possible explanation for this finding lies in the amount of time spent and greater effort made by longer survey takers, which in turn forms stronger commitment and leads to the reduction of default-setting effects. If this is true, we can predict that default settings will be more effective in influencing decision makers’ choices before the commitment is formed.

Our findings provide important insights for researchers and website managers. The choice between the opting-in and opting-out modes will make no difference in internet users’ trust in a website (Eastlick et al. 2006). Therefore, researchers can increase the participation rate in web surveys with the help of default settings without disturbing users’ trust. It is especially useful to improve participation rates accompanied by a sharp decrease in survey costs in the case of longer web surveys with a great deal of content. Moreover, pre-permission to send invitation emails given by respondents might shift effectively their attitude towards such
invitations and thus to surveys as well. According to our findings, pre-permission can also be acquired by the setting of default options, which further helps improve respondents' participation in such surveys and can also be applied to maintain the stability of the panel. Furthermore, it is necessary to consider the characteristics of specific web surveys when applying a default setting approach to improve respondents' permission-giving behaviours, because this approach works much better in the case of shorter and easier surveys.

Limitations and future research

Future research may focus on several limitations of our studies. First, in our study, web surveys were organised into only two levels according to length to examine the default setting effects. However, as a matter of fact, respondents' participation depends on various factors such as the topic of the survey, the reputation of researchers and the incentive modes. Follow-up studies might focus on the exploration of possible interaction effects between default settings and the above factors.

Second, in Experiments 2 and 3, only the influence of permission-giving behaviour was examined. What happens when participants are faced with a real survey invitation? Will they be more or less likely to participate in the survey? These questions remain to be answered through further research.

Third, as for the possible underlying process of default-setting effects in the context of web surveys, the explanation of 'inattention' was examined in Experiment 3, but the theoretical possibilities of 'loss aversion' and 'perceived recommendation' were eliminated merely by logical deduction. It is necessary to further examine those competing explanations by use of specific experiments.

Last, it remains to be determined whether the explanation of stronger commitment to complete surveys influences participation in longer surveys and encourages respondents to allow emails inviting them to participate in future surveys.

Acknowledgement

This research is sponsored by National Nature Science Research Grant of China (#70832001, #70902017). The author thanks Dr. Deqiang Zou for his helpful comments.
References


Improving response rates in web surveys with default setting


**About the author**

Liyin Jin (Ph.D., Paichai University) is an Associate Professor of School of Management at Fudan University. He spent three years as an Assistant Professor at Paichai University in South Korea. His research interests focus on consumer decision making, identity and consumer value, and online consumer behaviour. His research has been funded by the National Nature Science Research Grant of China.

Address correspondence to: Liyin Jin, School of Management, Fudan University, No. 670 Guoshun Road, Shanghai 200433, China.

Email: jinliyin@fudan.edu.cn

94