

Customer Privacy: Investigating the impact of data capturing techniques on consumer information disclosure

1. INTRODUCTION AND HYPOTHESES

The present paper examines how different question presentation techniques influence voluntary disclosure of private information by consumers focusing on the effects of three questionnaire design factors namely *Question Sequence* (Moon, 2000), *Comparative Nature* (Acquisti et al. 2012) and *Dyadic Relationships* (Zimmer et al., 2010), and their impact on information disclosure.

The literature notes that Question Sequence (QS) which is the presentation order of questions in a questionnaire, affects consumer responses yet literature seems ambivalent on how question sequence effects influence voluntary disclosure of private information. Moon (2000) supports that an ascending sequence of privacy-invasive questions (the least privacy-invasive questions at the start followed by questions with higher degree of privacy-invasiveness) maximises information disclosure suggesting that early, easy-to-answer questions warm up respondents for greater information disclosure. On the contrary, Acquisti et al. (2012) suggest that a descending question sequence (most intrusive questions at the start) produces better results due to respondents feeling less and less threatened by the lessening degree of privacy invasiveness. Focusing on the Ascending order (Moon, 2000; Zimmer et al., 2010), H1 indicates:

H1: An Ascending Sequence of privacy invasive questions will increase the Overall Actual Disclosure of respondents.

Comparative Nature (CN) is the innate tendency of individuals to compare themselves to other individuals and emanates from the basic instinct of imitation and mimicry. Acquisti et al. (2012; 2015) suggest that respondents feel less uncomfortable to disclose sensitive information when they are led to believe that others have provided the same or similar information. Synthesis of perceptions that the majority of others disclosed the asked information, leads to alleviation of the individual's perceived risks from a potential disclosure demonstrating compliance with the

masses' choice consequently leading to divulgence (Acquisti et al. 2012). Based on the latter H2 indicates:

H2: A High-level Comparative Nature of privacy invasive questions will increase the Overall Actual Disclosure of respondents.

Zimmer et al. (2010) specify that Dyadic Relationships (DR) refer to the ability to build a relationship between the two parties (dyadic) involved in a survey (the party conducting the survey gives out some piece of information with every question) and thereby foster voluntary disclosure of information due to the feeling of disclosure reciprocity. They differentiate between three types of dyadic relationships (reasoned, unreasoned, non-dyadic). In the reasoned dyadic the organisation provides respondents with direct information as to how the acquired data will be used by the organisation. Zimmer et al. (2010) note that reasoned dyadic relationship seems to increase intentions for divulgence but has not been tested towards actual divulgence. Bridging this gap H3 is formulated as:

H3: Fostering Reasoned Dyadic Relationship will increase the Overall Actual Disclosure of respondents.

None of the literature cited thus far has actually examined the combined effects of all three instrumental factors to identify interactive effects. Zimmer et al. (2010; p.403) recommend the examination of the “synergistic influence of dyadic relationships with other disclosure-influencing concepts” on voluntary disclosure of information. Similarly, Acquisti et al. (2012) propose triangulations between comparative statements and the sequential structure of questionnaires. The present paper addresses these views and the respective gap through H4:

H4: The combined utilisation of an Ascending Sequence of privacy invasive questions, high-level Comparative Nature and a Reasoned Dyadic Relationship will increase the Overall Actual Disclosure of respondents.

2. RESEARCH DESIGN AND FINDINGS

The main study focused on a 3x3x3 between-subjects quasi-experimental design utilising the three main instrumental factors (Comparative Nature, Questions Sequence, Dyadic

relationships) and the three respective conditions of each. Ultimately this led to 27 different questionnaires being designed using Qualtrics and administered to 1276 respondents with 40 to 60 participants being included randomly in each condition. Each version utilised 18 privacy related questions being asked in 27 different ways. Participants were asked to answer the 18 questions ultimately leading to information disclosure. A percentage was generated for each condition based on how many questions participants answered and how many they preferred not to disclose. This ultimately led to Overall Actual Disclosure (OAD) which was treated as the dependent variable. A 3-way ANOVA was conducted with OAD as the dependent and CN, QS and DR as the independent variables.

The present paper represents the first attempt to examine both the individual and synergistic effects of instrumental factors that drive information disclosure. The Ascending order of invasiveness generated significantly higher Overall Actual Disclosure (OAD) than the other two conditions of the Questions Sequence variable. Similarly, High Comparative Nature yielded the highest OAD for the Comparative Nature variable while the Reasoned dyadic relationship was also found to be the most effective compared to the Unreasoned and Non-dyadic relationships. H1, H2 and H3 were supported and in alignment with the recommendations of Moon (2000) for H1, Acquisti et al. (2012) for H2 and Zimmer et al. (2010) for H3. Significant differences were also found in certain dual and triple combinations providing partial support of H4.

Capitalising on the results of the present study, companies can utilise short statements (resembling reasoned dyadic relationships) prior to each attempt to capture customer data explaining the exact use and need for that data. This is to complement extended documents of privacy policies. When asking for the disclosure of private information, results also demonstrate that less privacy invasive questions need to precede ones that seek to capture more sensitive information as the ascending privacy-invasiveness approach decreases the chance for individuals to ‘clam-up’.

4. REFERENCES

Acquisti A., Brandimarte L., and Loewenstein G. (2015). Privacy and human behaviour in the age of information. *Science*, 347(6221), 509-514.

Acquisti A., John L.K., and Loewenstein G. (2012). The impact of relative standards on the propensity of disclosure. *Journal of Marketing Research*, 48, 160-174.

Moon Y. (2000). Intimate exchanges: using computers to elicit self-disclosure from Consumers. *Journal of Consumer Research*, 26(4), 323–339.

Zimmer J.C., Arsal R., Al-Marzouq M., Moore D., and Grover V. (2010). Knowing your customer: Using a reciprocal relationship to enhance voluntary information disclosure. *Decision support systems*, 48, 395-406.