Examining the combined effects of questionnaire-design factors that influence the voluntary disclosure of information by consumers to commercial organisations.

Christos Themistocleous*, Anastasios Pagiaslis* and Andrew Smith*

EXTENDED ABSTRACT

RESEARCH QUESTION

The evolution of marketing in the last decades has shown that consumer information is vital for the survivability and profitability of modern organisations (Graeff and Harmon (2002) and Acquisti, Brandimarte and Loewenstein (2015). Through correct use of consumer information, organisations are enabled to build customer loyalty while expanding their customer base through customised advertising, personalised products and individualised attention for customers. The impetus of this research is to examine how different presentation techniques of data-capturing questionnaires influence the amount of voluntary disclosures of private information by consumers to commercial organisations. The research focuses on the interaction of three instrumental factors that influence the structure and presentation of questionnaires that seek to capture private information by individuals. More specifically, this study examines both the individual and combined effects that *comparative nature* (Acquisti, John and Lowenstein, 2012) *dyadic relationships* (Zimmer et al., 2010), and *question sequences* (Moon, 2000; Acquisti, John and Lowenstein, 2012) have on overall actual disclosure.

Comparative Nature: Herding behaviour and social compliance of individuals are two well explored concepts in both marketing and psychology literature. Acquisti, John and Lowenstein (2012) applied the notions of herding and social compliance within the context of voluntary

^{*} The University of Nottingham, Business School, NG8 1BB, Nottingham, UK

disclosure of information and specified that individuals would adopt the disclosing behaviours and patterns of those around them naming this factor as *comparative nature*.

Question Sequence: The way that questionnaires are structured in regard to the order of questions that constitute them, influence the acquired responses of individuals (Barnes et al., 1995; Jordan-Zachery and Seltzer; 2012). Moon (2000) specified that early easy-to-answer questions can "warm up" respondents, ultimately resulting in greater information divulgence. A more recent study that examined how the order of questions in privacy capturing questionnaires influences overall disclosure, was that of Acquisti, John and Lowenstein (2012) who showed that the order of data-capturing with descending order of invasiveness positively affects the perceptions of individuals on how intrusive the overall questionnaire is.

Dyadic Relationships: Dyadic relationships is a concept linked to Social Response Theory (SRT). SRT, which serves as an extension of the Social Exchange Theory, states that when a party is the recipient of information by another party it matches that disclosure by engaging in revelation of similar information. This was more recently examined by Zimmer et al. (2010) who utilised different types of dyadic relationships for the identification of the most effective relationships regarding the propensity of individuals to disclosure information. Zimmer et al. (2010) focused on *reasoned, unreasoned,* and *non-dyadic relationships* and through these, examined how intentions lead to actual disclosure. The reasoned dyadic relationship provided respondents with direct information as to how their acquired data would be used by the organisation prior to each data-capturing question similar to statements that reflect the organisational *fair information practises*, was found to be the most effective approach in acquiring information.

Two sets of hypotheses are established with the first one examining the individual effects of the instrumental factors and the second their combined effects towards overall accrual disclosure. H1a: The high-level conditions of dyadic relationships in the questionnaire positively influences overall actual disclosure by respondents

H1b: The high-level conditions of comparative nature in the questionnaire positively influences overall actual disclosure by respondents

H1c: The high-level conditions of question sequence in the questionnaire positively influences overall actual disclosure by respondents

H2: The combined utilisation of the high-level conditions of the instrumental factors in the questionnaire positively influences overall actual disclosure.

METHOD AND DATA

Pre-test: Eighteen questions with differing privacy-invasiveness where synthesised which served as the backbone of the questionnaire. The questions were pretested on **122** individuals to determine the ones perceived as more privacy invasive generating a rank of these questions starting with the most to the least invasive ones. This assisted with the main study which was based on a 3X3X3 matrix through the high, neutral and low conditions of each of the 3 examined concepts (Comparative nature, Dyadic relationships, Question Sequence).

Main study: 27 versions of the questionnaire were synthesised based on the generated rank of questions from the pre-test and **1286** individuals were recruited. 51% were male and 49% female with average age of 26.67 (SD=8.747). A healthy amount of 46 individuals (Harrell, 2001) was included in each condition on average while each individual was assigned to a single condition. All respondents received voucher compensation for their completion time through the online platform.

RESULTS

H1a was supported and found to be consistent with the findings of Zimmer et al. (2010), the concept of reasoned dyadic relationships proved to be influential in inducing individuals to engage in actual disclosures.

H1b was supported in alignment with Acquisty et al (2012) study indicating that when individuals in the high condition when they are led to believe that others disclosed specific information they more easily engage into information divulgence

H1c was not supported and was found to be in more alignment with the views of Moon (2000) and Zimmer (2010) and the fact that ascending order of privacy invasiveness in questionnaires results to higher levels of information disclosure compared to Acquisty et al (2012) view that

H2 was partially supported. Certain combinations of conditions were found to work in synergistic ways to facilitate information disclosure that significantly generated higher percentages of overall actual disclosure compared to the individual utilisation of these concepts. Still, insights are provided to the fact that specific combination not only do not increase overall actual disclosure but instead hinder it. This provides leverage of creating a blueprint as which combination work for information disclosure maximisation and which ones don't.

CONTRIBUTIONS

This approach represents the first attempt at examining the synergistic behaviour of concepts that influence the presentation of questionnaires that seek to capture private information and their comparison with the individual employment of each concept in terms of their influence on overall actual disclosure. By understanding the information disclosure process of individuals and the factors that influence it, this research offers a blueprint on how organisations can capitalise on consumer behaviour through the order and disclosure of information design both in the questionnaire as well as in the terms and conditions in order to increase the effectiveness and efficiency of their data-capturing processes.