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## Towards a model of source and channel choices in business-to-government service interactions: A structural equation modeling approach

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### ABSTRACT

With a growing number of available communication channels and the increasing role of other information sources, organizations are urged to rethink their service strategies. Most theories are limited to a one-dimensional focus on source or channel choice and do not fit into today's networked communication landscape. The goal of this paper is to provide insight into the similarities, differences, and interdependencies of source and channel choices. Using structural equation modeling, a conceptual model is quantitatively tested among 1218 representatives of small and medium-sized businesses. Indications for source-channel interdependency were found in the effects of source and relationship characteristics on channel choices. Our data indicate key differences for the impact of *prior experiences*, *relationship characteristics* and *social influences*. Moreover, differences exist not only between sources and channels in general but also between various types of channel choices and various types of source choices, which seems to divert from existing theories.

### 1. Introduction

Due to the rise of new electronic channels, perceptions of proximity to others in terms of time and place have been changed (Korzenny, 1978) and sharing information with others is easier and cheaper than before (Mulgan, 2004). As a consequence, people seek out a wider variety of appropriate sources for various situations (Boase, Horrigan, Wellman, & Rainie, 2006). The changing role of information sources has been noticed in studies focusing on public service delivery processes (e.g., Arendsen, ter Hedde, & Hermsen, 2011; van den Boer, van de Wijngaert, Pieterse, & Arendsen, 2012; Janssen & Klievink, 2009). Businesses consult multiple information sources when they search for public information (de Vos, 2008). Similar, the moments of contact between governments and citizens has increased (Pieterse & Ebbers, 2008). The growing number of available communication channels and the increasing role of other information sources have made the information flow between public service organizations and citizens and businesses increasingly complex. Some argue that there is an increased multiplexity in the use of information sources and communication channels (e.g., Young & Pieterse, 2015; Janssen & Klievink, 2009). So, service organizations are urged to rethink their role as information source and the roles of their (electronic) service channels to provide efficient service support.

The situation is further complicated by a lack of theories that can help us understand a) why people use certain information sources and communication channels and b) what the interdependencies between both are (i.e., do people always use the same source-channel combination, or is interdependency triggered by certain aspects?). Existing theories on source and channel choices have two main drawbacks. First, they are grounded in a one-dimensional focus on channel choices (e.g., Media Richness Theory of Daft & Lengel, 1984, 1986) or the processes by which information sources are chosen (e.g., Byström and Järvelin's model of information seeking, Byström & Järvelin, 1995). There is a lack of integration between these theories and their conceptualization of source and channel choice processes. Some have clearly distinguished both concepts (e.g., Shannon & Weaver's, 1949 model of communication), while others have noted the existence of source-channel interaction (e.g., Saunders & Jones, 1990) or investigated the relationship between the source and channel (e.g., Christensen & Bailey, 1997). However, this has not resulted in an empirical replication or validated theory. The second drawback is the lack of generalizable theories and research outcomes. There is no single theory that prescribes or describes channel or source selection processes within the contemporary setting and has been validated.

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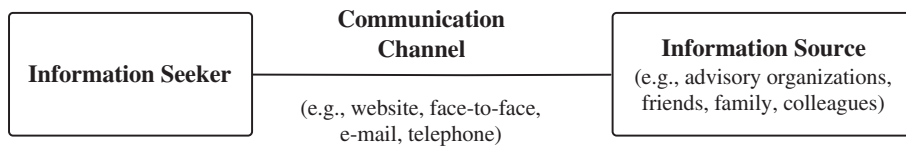


Fig. 1. Depiction of the relationship between information seekers, communication channels, and information sources.

In this paper we pave the way for the creation of an integrated theory. Given the lack of integrated theories, the goal of this article is to provide insights into the similarities, differences, and interdependencies between the selection processes of channels and sources. Therefore, the following research questions will be answered:

- To what extent are source and channel choice determined by the same underlying factors?
- How do channel and source choice relate to each other?

In this paper, source is defined as the person or organization storing the information from whom (or which) that information can be obtained by the seeker (adapted from Christensen & Bailey, 1997). Channel refers to the means by which information is transferred between the source and the seeker (adopted from Pieterse, 2009). Fig. 1 illustrates this relationship.

Thus, information seekers can obtain information from sources by using channels. Types of channels are traditional channels (e.g., voice-phone calls, face-to-face contact), electronic channels (e.g., website, email) and new digital channels (e.g., social media, mobile apps) (Reddick & Anthopoulos, 2014).

The scope of this paper is limited to business-to-government (B2G) service interactions. More specific, we studied Dutch Small- and Medium Sized Enterprises (SMEs) in their seeking processes for information about taxes.

In this paper, a Structural Equation Modeling (SEM) approach is used to test a conceptual model of source and channel choices. SEM is a multivariate statistical methodology that combines factor analysis and multiple regression analysis (Byrne, 2012). It is used to analyze series of structural (i.e., regression) equations. An advantage of SEM is that a hypothesized model can be tested in a simultaneous analysis of all included variables to determine the extent to which it fits the data. The general SEM model consists of two sub models. First, the measurement model is built, which focuses on how and to what extent observed variables are linked to their underlying latent factors. Second, the structural model defines relations among the latent factors.

This paper is organized as follows. Section 2 presents a conceptual model of source and channel choices. Section 3 discusses the design of the study, provides insight into the sampling, procedure and measures used in this study. It also describes how we have built the measurement model as preparation for testing our structural model in Mplus. Subsequently, Section 4 starts with an examination of the model fit regarding the intended structural model and moves on with a presentation of the findings. Conclusions, limitations, discussion and implications are presented in Sections 5, 6 and 7, respectively.

## 2. A conceptual model of source and channel choices

This section presents a conceptual model of source and channel choices, based on findings in existing literature and results of our earlier

conducted qualitative study, which was of exploratory nature and also in the context of B2G service interactions (van den Boer, Pieterse, van Dijk, & Arendsen, 2015).

### 2.1. Perceived characteristics of source and channel

It is well established in the literature that the selection of sources and channels is a subjective and socially constructed process. An indicator for this is the notion that *characteristics of sources and channels* are seen as perceptions that differ from person to person (Fulk, Schmitz, & Steinfield, 1990).

Source-accessibility and source-quality are probably the most studied aspects in the field of information behavior that influence source selection (e.g., Agarwal, Xu, & Poo, 2011; Fidel & Green, 2004; Lu & Yuan, 2011; Woudstra, van den Hooff, & Schouten, 2012, 2015; Zimmer, Henry, & Butler, 2007). Hertzum (2014) concludes, in a literature review, that both aspects are important in source choices. However, whether accessibility (i.e., time and effort to gain access to the source and the information) or quality (i.e., value or reliability of information and its relevance) exerts the most influence remains a topic of discussion because findings are mixed (Hertzum, 2014). Another aspect of influence is trustworthiness (Hertzum, Andersen, Andersen, & Hansen, 2002). It becomes more likely that a source will be selected when perceived trustworthiness increases. Trustworthiness is considered to be a broad concept that includes aspects such as reliability, benevolence, concern, and competence (Sheppard & Sherman, 1998). It is closely related to quality-related associations such as expected perspective, reliability and up-to-dateness (Woudstra & van den Hooff, 2008). The results of our exploratory study (van den Boer et al., 2015) uncovered that businesses select sources based on perceived expertise, accessibility, and perceived involvement of the source.

Similar assumptions exist for the effect of *channel characteristics* on channel choice. Different theories of channel choice consider *perceived channel characteristics* as an important influencing factor (e.g., Pieterse, 2009; Carlson & Zmud, 1994, 1999; Fulk et al., 1990). Zmud, Lind, and Young (1990) note that people differentiate between channels on perceptions of accessibility, cue variety, feedback, personalization, and information quality. Other aspects that influence channel choices of citizens are convenience and ease of use (Pieterse, 2009). Support for the notion that perceived *channel characteristics* influence channel choices, was also found in our exploratory study, which focused on B2G service interactions (van den Boer et al., 2015). Most expressions about characteristics concerned speed of answer, the possibility to inform for further (underlying) information, and the possibility to communicate verbally and non-verbally (language variety, multiple cues).

Although the relative importance of the various characteristics is subject to debate, it seems obvious that they do matter. Therefore, the following hypotheses are formulated (see Fig. 2):

H<sub>1</sub>. Perceived source characteristics, specified by level of expertise,

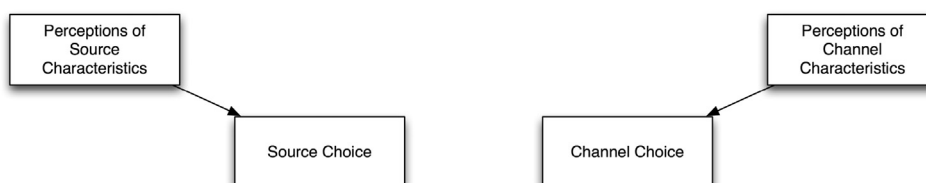


Fig. 2. Assumed effects of perceived characteristics on source and channel choice.

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