



# Exploring information-seeking processes by businesses: analyzing source and channel choices in business-to-government service interactions

Yvon van den Boer, Willem Pieterse  
and Jan van Dijk

Center for e-Government Studies, University of Twente, The Netherlands

Rex Arendsen

Netherlands Tax and Customs Administration, Centre for Professional Development and Communication, The Netherlands

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## Abstract

With the rise of electronic channels it has become easier for businesses to consult various types of information sources in information-seeking processes. Governments are urged to rethink their role as reliable information source and the roles of their (electronic) service channels to provide efficient service support. This article addresses how governments cope with the availability of numerous sources and channels and focuses on similarities, differences and interdependencies between source and channel selection processes. Individual and group interviews were held with businesses throughout the Netherlands. The results indicate that some factors influence source and channel choices (e.g. *task characteristics*), others influence only channel choice (e.g. *situational factors*, *channel characteristics*). *Source* and *relationship characteristics* uncover interdependencies between both, since these source-related concepts influence channel choices. Further insight is needed to increase our understanding and come to an integrated theory of source and channel choices in information-seeking processes.

## Points for practitioners

The channels used by the government are in their own control (i.e. information quality); however, other sources and their channels are outside their control. Management of these sources can be realized through strategic partnerships with crucial sources. The first implication is that governments provide content to other sources, which these

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### Corresponding author:

Yvon van den Boer, PO Box 217, 7500 AE Enschede, Enschede, Overijssel 7500 AE, The Netherlands.

Email: yvonvandenboer@gmail.com

sources can use for advice to its customers. The second implication concerns the use of cross-referrals between sources and their channels. For instance, the government website contains a recommendation to call an advisor for specific information since this source-channel combination provides only general information.

### **Keywords**

channel choice, government, information seeking, service delivery, source choice

## **Introduction**

Due to the development of new electronic channels, perceptions of proximity (i.e. time and place with regard to others) have been changed, as already noticed by Korzenny in the late 1970s (1978). Sharing information with others is easier and cheaper than before (Mulgan, 2004) and people seek out a wider variety of appropriate sources for various situations (Boase et al., 2006). The changing role of sources has been recognized in studies focusing on public service delivery processes (e.g. Arendsen et al., 2011; Janssen and Klievink, 2009; Van den Boer et al., 2012). Driven by the new developments, researchers argue that the number of contacts between citizens and the government has increased (Pieterse and Ebbers, 2008) and that businesses consult several sources during their search for governmental information (De Vos, 2008). Some have pointed to an increased multiplexity in the use of sources and channels (e.g. Janssen and Klievink, 2009; Young and Pieterse, forthcoming).

When searching for governmental information to solve public tasks, citizens and businesses as information seekers take the initiative and are in control of the information-seeking process. Examples of tasks are ‘what fiscal impact comes along with the change of the legal form of my business?’ and ‘how may I postpone my income tax return?’ Governments are not the only potential information sources to consult for solving these tasks; other persons or organizations as sources may be consulted as well. In information-seeking processes, actual interaction may occur between the seeker and the source (i.e. conversation), but the seeker may also obtain the required information himself (i.e. consultation) (Ebbers et al., 2008).

For several decades, governments have sought suitable service delivery strategies to provide support to citizens and businesses that seek information to fulfill their tasks. Research on, for example, e-government and multichannel management has contributed to current strategies. The primary aim of these strategies is to guide information seekers to electronic channels, such as a website. This would lead to faster service delivery, a reduction in administrative burdens and a rise in productivity (e.g. European Commission, 2004; Gagnon et al., 2010). At present, however, the use of the more costly channels such as the telephone and face-to-face communication remains high (e.g. OECD, 2012; Pieterse and Ebbers, 2008). Furthermore, service provision has become increasingly complex with the palette of more channels than ever before (Gagnon et al., 2010). It will become more

difficult for governments to maintain cost-effective, high levels of service. On the other hand, it makes it more difficult for citizens and businesses to find the information they are looking for. This makes it increasingly complicated to match the supply and demand in information-seeking processes.

The sender–receiver model of Shannon and Weaver (1949) teaches us that the more channels and sources there are to choose from, the greater the chance that there is noise (i.e. distortions, errors and extraneous material). Information-seeking in such a networked context of various sources, with the unpredictable nature of network interactions, makes it a very elusive or ‘fuzzy’ phenomenon (Boyd, 2004). So, for governments it will become more difficult to maintain high levels of service, especially when information seekers do not primarily rely on the government but instead turn to other sources because they are now easier to access than before (i.e. through the rise of new and social media). Furthermore, the increasing availability of service channels limits the efficiency with which governments can provide support to information seekers. These considerations lead to the question of how governments should address the availability of numerous information sources and channels.

Although various disciplines – for example, information behavior, communication and organization science – have researched (1) the process of information seeking and source choice (e.g. Byström and Järvelin, 1995; Leckie et al., 1996; O’Reilly, 1982), and (2) the underlying factors for the selection of channels (e.g. Daft and Lengel, 1984, 1986; Fulk et al., 1990). However, there is little articulated research that integrates source and channel choice processes. Some researchers have mentioned both concepts (e.g. Shannon and Weaver’s (1949) model of communication), while others have noted the existence of source–channel interaction (e.g. Saunders and Jones, 1990) or investigated the relationship between the source and channel (e.g. Christensen and Bailey, 1997). Nevertheless, this has not resulted in a validated theory or empirical replication. It is therefore unknown what differences and similarities exist between source and channel choice processes as well as how those two relate to each other. Hence, the following two research questions are addressed in this article:

RQ<sub>a</sub>: To what extent are source and channel choice influenced by the same underlying factors?

RQ<sub>b</sub>: What indicates the existence of interdependencies between source and channel choice?

This article focuses on how businesses seek public information – business-to-government (B2G) service interactions – since its context is far more complex and networked than that faced by citizens. First, businesses can take many forms, from self-employed sole traders to businesses with numerous employees (Jansen et al., 2010). It is quite difficult to determine who the information seeker is in a business and this hinders the governments’ ability to realize a straightforward

service delivery strategy. Second, businesses have more contact with governments due to more rules and the notion that contact may be indirect (i.e. other parties are involved in the interactions), which gives rise to a networked character (Jansen et al., 2010). Accordingly, one would expect service delivery research to devote substantial attention to businesses in general and the use and choice of service channels in particular. However, most research on channel choice focuses on citizens (e.g. Pieterse and Ebbers, 2008; Reddick, 2005; Thomas and Streib, 2003) and substantial insights into businesses' choice behavior are lacking.

Public service delivery strategies primarily focus on smaller businesses (i.e. the self-employed and businesses with up to 50 employees). These types of business are dependent on general service provision (i.e. they have no fixed contact person in the government). For small businesses, addressing obligatory public matters is often a secondary task outside their core business (Bergers, 2003). It is more likely that a small team or a single person is responsible for the majority of the contact with government agencies and the search for public information. So, despite our focus on B2G service interactions, which may imply collective choice behavior by businesses searching for information, the starting point of this article is individual choice behavior.

The article first sets out the theoretical background, followed by a description of the research method. The third section presents the results. Subsequently, the results are contrasted to existing findings in the literature, limitations are discussed and conclusions are drawn. The article ends by providing some implications.

## **Theoretical background**

This section starts by providing definitions of the concepts source and channel, followed by a discussion of theories of source and channel choices that provide insight into the associated determinants.

### *Defining the source and channel*

A clear distinction between the concepts source and channel is needed to study to what extent source and channel choice are determined by the same underlying factors. Although the channel and the source are not clearly defined in the current literature and sometimes seem to be interchangeable concepts, we adopt the idea that information sources can be reached through various channels (Byström and Järvelin, 1995). In this article the channel is defined as: 'the means by which a message is sent by a source or obtained by a receiver' (adopted from Pieterse, 2009: 13). With regard to the definition of the source, this article adopts the definition of Christensen and Bailey (1997), with the addition that sources are human in nature (i.e. one person, a group of persons, an organization), based on the perspective of Saunders and Jones (1990). Thus, the source is defined as the person or organization where the information is stored and can be obtained by the seeker.

Since this article adopts the users' perspective the concepts sources and channels need some further explanation. Businesses are viewed as the users of public service delivery. When they start to search for information about, for instance, complex tax matters (e.g. should I change the legal form of my business?) they have various potential sources where they can obtain information. This information might be helpful in formulating the task at hand as well as problem solving and therefore be obtained from all types of sources. In many cases, the information flows directly from the source to the information seeker; however, in some situations it might take multiple steps for the information to flow from the originating source to the information seeker (as exemplified in theories such as the Two Step Flow of Communication (Katz and Lazarsfeld, 1955) and communication networks (Rogers and Kincaid, 1981)). When the perspective of the government is adopted, the sources (other than the government itself) might be seen as intermediaries. The government (as originating source) may collaborate with intermediaries and provide them with information for information seekers. However, this article, which focuses on and adopts the perspective of the information seeker, does not intend to stress the role of the originating source, but rather to study the entity that is consulted by the information seeker. Examples of sources are the government, financial expert organizations or industry organizations, and personal sources that have experience with the topic (e.g. colleagues, family/friends). Further, channels are, in this context, purely seen as the means by which information seekers obtain information from a particular source. Examples of channels are websites, e-mail, the telephone, and face-to-face communication.

### *Relevant theories of source and channel choices*

Channel choice theories are mainly built upon the Media Richness Theory (MRT) of Daft and Lengel (1986). The factor that is commonly recognized as a vital influence is *task characteristics* (e.g. Fulk et al., 1990; Pieterse, 2009; Sitkin et al., 1992). Carlson and Zmud (1999) argue in their Channel Expansion Theory (CET) that *experiences* with channels also influence future choices. The role of *experiences* is also recognized in the Social Influence Model (SIM) of Fulk et al. (1990); however, the core of SIM argues that aspects of the direct environment of a certain individual who encounters a choice are influential on the final choice (i.e. social influence). The Dual Capacity Model (DCM) of Sitkin et al. (1992) pays attention to the role of the environment as well. Besides, DCM assumes that characteristics of the sender, the receiver as well as the organization are of influence. More recently, Pieterse (2009) has elucidated the impact of situational and emotional constraints. He argues that the process of choice making is dominated by habits rather than rational considerations. However, none of the above-discussed models actually differentiates between the concepts channel, source and medium as MRT did. They all focus narrowly on the channel or medium and its influencing factors and neglect the role of the information source in the communication process.

A theoretical perspective that pays more attention to the role of the source is rooted in the information behavior literature. Various models (e.g. Byström and Järvelin, 1995; Leckie et al., 1996) consider source choice as a first step in the action phase (i.e. actual information retrieval and interaction) of the information-seeking process. Moreover, some of them provide insight into the interaction of source and channel selection (e.g. Christensen and Bailey, 1997; Saunders and Jones, 1990). Christensen and Bailey (1997) found that source accessibility and routineness of the task moderate the selection of a channel. Similar to the realm of media choice, evidence for the impact of *task characteristics* has been found in many studies on information-seeking (e.g. Byström and Järvelin, 1995; Ingwersen and Järvelin, 2005; Leckie et al. 1996). The influence of *situational factors* is recognized by Byström and Järvelin (1995). The impact of the context (e.g. size of organization, established communication patterns) is acknowledged in many forms in various theories concerning information-seeking (e.g. Baldwin and Rice, 1997; Byström and Järvelin, 1995; Leckie et al., 1996; Saunders and Jones, 1990).

Comparing both research domains teaches us that source and channel choice are to some extent influenced by the same underlying factors. One potential difference can be found in the fact that contextual influences are more prominently acknowledged in the domain of source selection.

## Method

### *Methodology and data collection*

Several qualitative research methods were used. First, we conducted focus group interviews. Due to the interaction between the participants, focus group interviews are well suited to generating multiple issues and perspectives about a topic (Krueger and Casey, 2009; Morgan, 1988). Another advantage is that they can elicit the underlying opinions, behaviors and motivations in complex topics (Krueger and Casey, 2009). However, because of the group interaction, group interviews may lack depth regarding insight into individual motivations for behavior (Morgan, 1988). Therefore, focus group interviews were followed by individual interviews. Individual interviews tend to uncover more depth and meaning in behavior, which tend to be hidden in focus group interviews. The same themes were addressed in both focus group and individual interviews, for instance (1) the use of channels and sources in general, including participants' experiences, (2) the information-seeking process from question to answer, and (3) reasons for choosing a particular channel to consult a source in a certain situation to answer a certain question (e.g. the impact of the environment, perceptions of the *channel*, *source* and *task characteristics*). We used a semi-structured approach in both focus group and individual interviews, which enabled the participants to randomly discuss the various topics and talk about problems they had encountered recently. For instance, the following questions were asked: (1) What sources did you use the last time you were looking for information about taxes? Why did you use those particular

sources? (2) What channels did you use for contacting each source? Why did you use those particular channels in combination with these sources? (3) What earlier experiences have you had with these source–channel combinations, and do they influence your current and future information-seeking processes?

### *Sample and demographics*

Employees working in Small and Medium Sized Enterprises (SMEs) and who were responsible for or involved in financial matters formed the population. The study was conducted at the Dutch Tax and Customs Administration (NTCA). All respondents were randomly selected by a research agency, based on the database of the Dutch Chamber of Commerce. To control for geographical bias, the individual and focus group interviews took place at various places throughout the Netherlands. The individual interviews were held at the offices of the respondents and the group interviews at conference centers and research agencies.

For the focus group interviews, the sample population was divided into two groups: (1) the self-employed and (2) people from businesses with up to 49 employees. In the literature, three or four group interviews for each category is considered to be acceptable (Krueger and Casey, 2009). Therefore, we conducted a total of six group interviews: three sessions with self-employed participants and three sessions with employees working in an enterprise of up to 49 employees. The ideal size of a focus group, for non-commercial purposes, is five to eight people (Krueger and Casey, 2009) or six to ten people (Morgan, 1988). Regarding the six focus group interviews,  $n = 58$  people were randomly selected. Eventually,  $n = 40$  people participated, with an average of  $n = 6.67$  participants per group interview.

In the individual interviews,  $n = 15$  people participated. The sample population was similar to that of the group interviews. However, the sample contained more participants working in enterprises with employees because we were more interested in this subgroup as we expected that there would be greater variety in participant characteristics (e.g. position in organization and their organizations), which could impact the search process. In the end, a third of the participants in the individual interviews were self-employed. Other participants were working at enterprises with employees; 50 percent of these had up to ten employees. All participants in the individual interviews made at least some use of a financial expert organization to help manage their tax affairs. No business fully managed its tax affairs on its own. In contrast, a fifth of the participants in the focus group interviews fully managed their own tax affairs. The rest of the participants made at least some use of a financial expert organization. Finally, three-quarters of all participants in both individual and focus group interviews were men.

### *Data analysis*

All group interviews were video and audio recorded. The individual interviews were only audio recorded. We transcribed the data as soon as possible after conducting



the interviews to make sure that the information gathered remained clear and problems with interpretation could be quickly solved (Taylor and Bogdan, 1984). We used the inductive analysis technique (Patton, 2002). This means that the findings in this research emerged from the data themselves and not from expectations and existing theoretical models (Thomas, 2006). Even though it is difficult for a researcher to completely disregard the existing theoretical perspectives, we think this is the best method because of its high flexibility and theoretical freedom (Braun and Clarke, 2006).

We systematically analyzed the data collected. First, we coded relevant elements. To identify these elements, we searched for sentences or phrases within sentences in which participants were talking about their choice behavior. For example '*you cannot find this on the Internet because it is focused only on this situation. This is often the reason for calling someone*'. Second, we labeled the coded phrases and sentences, which resulted in 13 categories. To achieve this, we selected words or word phrases and grouped them. Next, we made clusters of synonyms. For example, '*I live nearby*' and '*at that moment it was too far for me*'. Both statements say something about the distance to a source. Table 1 provides an overview of the final coding scheme. Third, we refined and reduced the categories identified by analyst triangulation (Patton, 2002). Three other scientists each coded one group and three individual interviews. Almost 50 percent of the collected data were double-coded. The average inter-rater reliability between the coders and the researcher was  $k = .769$ , which is substantial (Landis and Koch, 1977). Finally, we organized a discussion between the coders and the researcher to reduce and refine the list of categories.

## Results

This section presents the results. RQ<sub>a</sub> (*To what extent are source and channel choice influenced by the same underlying factors?*) will be answered. At the same time, indicators for the existence of source–channel interdependency will be discussed, which answers RQ<sub>b</sub>. Participants indicated that various factors were involved in their selection process of sources and channels to find the information to perform their tasks. Table 2 provides an overview of the percentage of times these factors were mentioned by participants among the total considerations mentioned. A distinction was made between statements that are source related and channel related. Further, the results of the focus group interviews and individual interviews are separated and each add up to 100 percent.

The results show that statements about the impact of *task characteristics* were regularly made for source choice as well as channel choice. This indicates that both channel and source choices are affected by *characteristics of the task*. For example, for a complex task participants will consult an expert source such as the advisor via a personal channel such as face-to-face or the telephone. For a simple question another source and channel will be chosen, for instance, the government via the website.



**Table 1.** Main factors in final coding scheme

Factors	Description	Sample incident
Perceived source characteristics	The subject determines the expertise, level of involvement, approachability of a source or how experienced a source is regarding the topic of knowledge.	Uh, why are you going to an accountant for example ... he thinks from the view of an entrepreneur, he thinks along with me. (I-12)* In a normal situation you cannot reach that person by telephone. You get the call center of the NTCA, it is not that easy to reach the expert. There is also no direct phone number or e-mail address ... (FG5-P6)
Perceived channel characteristics	The subject determines the speed of feedback, and interaction possibility of a specific channel. Or whether or not it is possible to register certain information with that channel, or the suitability of a certain channel to exchange specific information.	Than you consult the accountant, you call him, because it is direct, the fastest way ... (FG4-P4) The accountant is always specific thus that I always call him in first instance, and that is also the easiest way to get a quick answer. (I-10)
Task characteristics	The subject determines how the complexity, importance or specificity of the task is related to the organization and how this affects choices.	Because of the complexity it is always the accountant ... (FG4-P6) Usually I call the NTCA, for those trivial questions. (FG5-P2) ... for a more specific question I would prefer an expert who knows about the nature of my business and is familiar with my business and will provide suitable answers. (I-15)
Prior Experiences	The subject determines how prior experiences (positive or negative) led to the choice for the same or another channel or source.	My experiences have taught me that it is the best not to call (the NTCA). First of all, you spend huge amounts of time on the phone whereas if you write a letter you will get the answer. (FG5-P7)

(continued)

Table 1. Continued

Factors	Description	Sample incident
Relationship characteristics	The subject determines the nature of the relationship with a certain source ((in)formal, closeness, frequency of contact, etc.)	Well, I knew that guy {an accountant} well and for a very long time, before I started with this. Thus, there is a friendly relationship. Thus, I call him and sometimes also in the evening ... (I-3) Yes, I can call him {the expert, a retired accountant}, I can also visit him. It is friendly in such a way that it is also possible in the evening. And it is a man who gives me useful advice and someone who really looks at my business figures, he won't make something up, but he really puts effort in it, tries to help. (I-14)
Situational factors	The subject determines how the time (e.g., evening or daytime), available time to solve a task, or distance to a source influences choices.	Most of the times I drop by. I live nearby and than I can talk to that person face-to-face. (FG2, P5) It depends, when I have little time I grab the phone. (I-1) Most of the times I use the Internet outside office hours. If it is the NTCA I prefer to call. But when its evening and something pops up my mind and I have some time left, I try to obtain information via the Internet ... (FG2-P4)
Social influences	The subject determines how advice of others, or learning from watching others' choice behavior, leads to a certain choice.	... if you encounter each other and you have a 'hot' topic that you don't know much about and he says this and this and do that and go have a look on that specific website. That happens sometimes ... (I-5) If you look over someone's shoulder how he is doing that, yes, there are several ways about how to use the internet for example, ... oh yes, that's also a way how I could use it ... (I-12).

\* The abbreviation for a citation in an individual interview is I followed by the number of the specific interview (e.g. I-15). The abbreviation for a citation in the Focus group interview is FG followed by the number of the discussion and the number of the participant (P) in that specific discussion (e.g. FG I-P1).

**Table 2.** Frequency distribution of factors

Factors	Focus groups (N = 215)		Individual interviews (N = 214)	
	Source related	Channel related	Source related	Channel related
Task characteristics	9.3%	7.4%	10.3%	11.2%
Prior experiences	15.8%	14.0%	8.9%	7.8%
Relationship characteristics	4.6%	0.5%	3.7%	1.9%
Situational factors	2.8%	4.2%	3.7%	12.7%
Social influences	1.9%	1.4%	1.9%	3.3%
Perceived source characteristics	18.1%	4.2%	16.4%	2.3%
Perceived channel characteristics	0.0%	15.8%	0.0%	15.9%
<i>Total</i>	52.5%	47.5%	44.9%	55.1%

Statements about *prior experiences* of sources or channels are rarely made separately. Considerations are mainly about experiences with the use of certain source-channel combinations. General experiences do exist, but the experience with a certain channel such as the telephone may change when the experience with this channel in combination with a particular source such as the government differs from that general experience. For instance, a person may associate the telephone with *getting a quick answer*; however, when the waiting time to reach the government via the telephone is long, the experience of the telephone in combination with this specific source will change.

This study finds that statements with respect to *relationship characteristics* refer primarily to the selection of the source instead of channel choice. In both focus group and individual interviews most considerations were source related. However, there were also some statements in the individual interviews explicitly related to channel choice. For instance, one participant described his relationship with the accountant as friendly and informal since they have known each other for a long time. This is one reason to communicate face to face with the accountant. In contrast, another participant noted that she often communicates via e-mail with the accountant, since her relationship with the accountant is formal, and she barely even knows him. Only when they need to discuss many things does she call him.

In contrast to the impact of *relationship characteristics*, statements with regard to the impact of *situational factors* seem primarily related to the selection of channels instead of sources. In particular, the results of the individual interviews demonstrate this pattern; the difference in the focus group interviews is small but in the same direction. This difference between channel and source choice seems to indicate that these *situational factors* do influence channel choice, but for source choice other factors are of more importance.

Regarding the effect of *social influences* there is no substantial difference between the effect on source and channel choices. Statements on this factor were difficult to elicit, though some of the participants in the individual interviews explicitly elaborated about the impact of others concerning their channel choice.

Statements on *channel characteristics* relate solely to the selection of a channel. No explicit statements were found that are related to source choice. Considerations with respect to *characteristics of the source* are primarily expressed when making a source choice. When zooming in it seems that this pattern is particularly related to the perceived level of expertise (two-thirds of these statements are about expertise). None of these expertise-related considerations affect channel choices. On the other hand, other types of *source characteristics* (e.g. approachability, involvement) do affect not only source choice, but channel choice as well. These findings indicate that these more service-related skills of a source influence what channel is selected. For instance, a source such as the government is perceived as being difficult to reach via the telephone, which leads to the choice for the website as an alternative channel.

## Discussion and conclusions

The objective of this article was to explore the differences, similarities and interdependencies of the selection processes of sources and channels during B2G service interactions. We adopted a user perspective and conducted a qualitative study that examines how businesses seek for information about tax matters. As an answer to RQ<sub>a</sub> we can formulate that source and channel choice are to some extent influenced by the same underlying factors. *Task characteristics* and *prior experiences* are obviously related to both. The results for *prior experiences* seem to indicate that sources and channels are clustered choices. *Situational factors* and *perceived channel characteristics* clearly influence channel choice, but no effect for source choice was detected (though the difference for *situational factors* was small). *Relationship characteristics* seem to primarily affect source choice and have less impact on channel choice. Although *perceived source characteristics* clearly influence the selection of sources, service related skills of the source seem to affect channel choices as well. Given the low occurrence of statements about *social influence* it is impossible to determine its impact on source and channel choices. Further research is needed to gain more insight into the exact influence of these factors.

*Perceived source characteristics* and *relationship characteristics* seem to trigger the interdependencies between source and channel choice processes, which answers RQ<sub>b</sub>. These source-related concepts seem to influence channel choices. Quantitative studies are needed to increase our understanding concerning these interdependencies. Below we will reflect on the results of our study in relation to the existing literature.

Our findings indicate that *task characteristics* are important in the selection processes of sources and channels. This result generally does not differ from other research findings (e.g. Anderson et al., 2001; Byström, 2002; Savolainen and Kari,

2004; Sitkin et al., 1992). The effects of *prior experiences* on channel choices are described by many theorists in the realm of media choice (e.g. Carlson and Zmud, 1999; Fulk et al., 1990; Pieterse, 2009). However, the results related to source choice are more difficult to compare with the existing findings due to the interchangeable use of the concepts of source and channel (e.g. Baldwin and Rice, 1997; Ellis, 1989; Savolainen, 1995); the lack of any definitions (e.g. Johnson, 2003; Krikelas, 1983; Wilson, 1981, 1999); or the use of definitions that differ from ours (e.g. Byström and Järvelin, 1995). Because our study seems to be the first to notice this result, further insight is needed. The findings concerning *situational factors* seem to differ from those in other studies, as the results seem to indicate that they influence channel choice rather than source choice. Other studies that have focused on channel and source choice in the information-seeking context found that *situational factors* affect both (Byström and Järvelin, 1995; Savolainen, 2008) and support for the impact on channel choice is abundant (e.g. Nicholson et al., 2002; Pieterse, 2009). The finding that *channel characteristics* are related to channel choice is in agreement with many other studies in the field of media choice (e.g. Carlson and Zmud, 1999; Fulk et al., 1990). This study uncovered that *source characteristics* affect source and channel choices. Many others provide evidence of their influence on source choice (e.g. Gerstberger and Allen, 1968; O'Reilly, 1982; Woudstra and Van den Hooff, 2008). Conversely, the effect of *perceived source characteristics* on channel choice has been less studied. So far, it seems that only Christensen and Bailey (1997) have studied the effect of source characteristic accessibility on the selection process for channels. The current study is therefore one of the first to examine an effect of various source characteristics on channel choices. Further research is needed to gain more insight into this relationship, which also reflects one of the interdependencies between the selection processes of sources and channels. Finally, our results indicate not only an effect of *relationship characteristics* on source choice but also seem to indicate that channel choices are affected. The finding that *relationship characteristics* influence source choice is similar to the findings of Cross and Sproull (2004), who argued that patterns of relationship between seeker and source facilitate or constrain the information-seeking process. The notion that *relationship characteristics* are an indicator of source-channel interdependency is supported in studies by Haythornthwaite and Wellman (1998) and Haythornthwaite (2002) as they argue that channel choice depends on various aspects of the relationship (e.g. topic of information exchange, mutual schedules, stage of development of the tie). Sitkin et al. (1992) also present findings related to the notion that channel choice is affected by relationship characteristics in terms of the history between seeker and source.

Apart from the findings derived from the statements of the participants, we observed patterns in the data that indicate that the *position of the information in the business* exerts influence on the information-seeking process and its source and channel choices. While a few participants explicitly supposed that there might be differences in seeking patterns, which may be a result of their different positions, this argument is based rather on the researcher's observations during data analysis.

The participants in our study had different positions in their organizations (e.g. managing director (with or without employees), administrative employee, financial expert). The type of position seems to lead to different source and channel choices as well as differences in the number of sources and channels selected throughout the information-seeking process. For instance, a managing director immediately calls an advisor while a financial specialist or administrative employee first visits a website and reads up on the topic. The specialist might even make their own decision without consulting an advisor. Thus, the observation that *position of the information* in a business might influence source and channel choices seems material for future quantitative studies.

Of course, this qualitative study is subject to certain limitations. A first limitation is that, due to its qualitative character, it is impossible to generalize the findings. This study was of an exploratory nature, which led in the end to only indicative results. The second limitation is that with regard to organization size we had an over-representation of businesses with employees. Actually this was planned forehand, because we were especially interested in the situation of those larger businesses. So, the purpose of this study was to study similarities, differences and interdependencies between source and channel choices and not to say anything about the whole population. A third limitation stems from the fact that the study took place in the Netherlands and thus it is difficult to extrapolate the results to other countries. Nevertheless, according to the differences identified between countries all over the world, as the research of the OECD (2012) shows us, it seems plausible that the process of channel and source choice in this context is comparable to that of other Western countries. Furthermore, the current research focuses on B2G service interactions, which means that we focused on interactions in which information seekers took the initiative for communication. This approach reflects a linear model of communication and limits the generalizability of our findings. However, in real-life settings the information seeker and information source continually switch roles as information is shared (Boyd, 2004). This characterizes an iterative and reciprocal process. Nevertheless, since little is known about businesses' source and channel behavior in B2G service interactions, we started with a simplification of reality. Other conceptualizations of these roles are important to address in future studies. Despite these limitations, we believe the present study offers useful contributions. Quantitative studies are needed to determine whether and to what extent the indicators and factors identified are influential.

## Implications

The study presented in this article explores source and channel choices of businesses in a qualitative setting. It is one of the first to generate insights into businesses' information-seeking behavior in B2G service interactions. The results of the study show that information-seeking behavior is not a simple and straightforward process of 'businesses obtain information from the government via the Internet', but rather a complex web of (reciprocated) interaction processes. Current service

delivery strategies of governments focus solely on the management of multiple channels, which they have at their disposal. The findings of this study indicate that this view is too narrow as other information sources play a crucial role in B2G service interactions as well. But what implications can be derived from this?

The role of the source manifests itself in two ways. First, the government itself is a source in the network of potential sources. The channels used by the government (e.g. the website) are under the control of the government itself. This enables the government to ensure the quality of the information provided and refer information seekers to suitable channels (i.e. multi-channel management). Second, sources other than government can be consulted, which are outside the control of the government. Those sources provide information via their own channels that can be similar to those of the government. Even though the channel is the same in both situations, the source is not, which might lead to noise and a decrease in information quality. Management of these sources can be realized through strategic partnerships with other (formal) sources (e.g. advisors, industry organizations, unions) that information seekers may consult. Two implications for this are: (1) the government provides content to other potential sources that information seekers may consult, which these sources can use in giving advice, and (2) use is made of cross-referrals between sources and their channels (multichannel and multisource management) as illustrated in the example below. To realize this it is important to know exactly what information is obtained through which source and channel. This results in a matrix with channels and sources (the axes) and the type of services (cells).

Example: An entrepreneur seeks advice on changing or not changing the legal form of his or her business. This is classified as a specific question that differs from business to business. The website of the Tax Office provides only general information about the existence of various legal forms. The Tax Office could use the following cross-referral on the website: *'The choice of a legal form is a complex question, which asks for a tailor-made answer. Therefore, we cannot provide you with the answer. Make a phone call or have a meeting with an advisory organization; they can provide you with all relevant information suitable to your own situation.'*

This article is among the first to elucidate the importance of integrating multiple sources as well as multiple channels in the design of public service delivery strategies. It gives the initial impetus in the creation of an integrated theory of source and channel choices in information-seeking processes. Future quantitative research should be conducted to increase our understanding. All this could provide useful information for governments about the decisive factors in the selection of sources and channels and thus where to focus in developing a suitable service delivery strategy.

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**Yvon van den Boer** is a researcher at the Netherlands Tax and Customs Administration (NTCA). Previously she worked at the University of Twente where she obtained her doctoral degree in June 2014 after a three-and-a-half-year undertaking. Her research focuses on source and channel choices in information-seeking processes in business-to-government service interactions. On this topic she has published several conference papers and articles.

**Willem Pieterse** is the Chief Operating Officer of Syndio Social, Inc., a Chicago-based research and consulting firm. Previously he worked as a Research Associate in the Science of Networks in Communities Research Group (SONIC) at Northwestern University and is a founding member of the Center for e-Government Research at

the University of Twente in the Netherlands. Willem is an expert on Multi-channel Management, e-Government and Social Networks. He has published dozens of articles, book chapters and conference papers on these topics.

**Rex Arendsen** is head of the research department of the Netherlands Tax and Customs Administration. He is a research fellow at Delft University of Technology. His research interests are electronic government for businesses, tax compliance management systems, and the role of commercial intermediary service providers in enhancing tax compliance. Rex has recently published in *Government Information Quarterly* and several issues of *Lecture Notes in Computer Science*.

**Jan van Dijk** is professor of communication science and the sociology of the information society at the University of Twente, the Netherlands. He is chair of the Department of Media, Communication and Organization and the Center of eGovernment Studies. His best-known book is *The Network Society* (1999, 2005, 2012). Van Dijk is an advisor to the European Commission and a number of Dutch ministries and city departments on issues related to ICT. Personal website: <http://www.gw.utwente.nl/vandijk>.