On the Interaction of Source and Channel Choice in the Government-to-Business Context

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Abstract. Communication processes between governments and businesses are increasingly networked. This paper increases our understanding of the information seeking behavior of businesses in the Government-to-Business domain. We conducted a quantitative study among Small and Medium-sized Enterprises in the Netherlands to discover source-channel interaction. The results provided several interactions regarding nature of relationships with sources, channel and source choice. This proves that it is important to consider source and channel choice together to gain an important insight regarding information seeking behavior of businesses. Today's networked environment implies that besides having direct contact with governments, businesses make use of other sources to get governmental information. In addition, they use various channels to contact these sources, suitable to the type of relationships. This is vital information for governments, because it helps to optimize their service delivery strategy towards businesses.

Keywords: channel and source choice, interactions, information seeking, government-to-business.

1 Introduction

Governments frequently interact with citizens and businesses. Citizens and businesses seek government information and use public services while governments send information to these groups. One first major call to improve these processes was made in the early 1990s when advocates of the New Public Management argued for a more 'customer' centric approach under the assumption that governments were too bureaucratic and inefficient in their process [1]. A second call came with the arrival of new electronic communication channels in the 1990s. This not only led to new ways of communication, but also to questions about how to manage the increasing number of channels to make service and communication processes more efficient without suffering in quality [2]. Moreover, the Internet has also changed the patterns of communication in society. Groups in society are increasingly networked and pluriform in their media

consumption [3]. This for example implies that communication no longer solely directly flows from governments to businesses and citizens and vice versa, but may take multiple steps. This applies even more to businesses. Reason is the high complexity in Government-to-Business (G2B) interaction [4] that leads to a networked character both within the organization as externally [5]. These developments challenge the effectiveness of communication between governments and their client groups and call for an increase in the level of knowledge on government-client interactions.

However, knowledge in this domain is lacking in a number of ways. First of all, research in this area almost exclusively focuses on the Government-to-Citizens (G2C) context. Whereas many studies have focused on the use of channels and communication effectiveness in the G2C-setting [e.g. 6], there are very few studies in the G2B-setting. This leads to a lack of knowledge about this target group in general [7]. This is complicated even further by the increasing expectations of businesses regarding the quality of government service provision [8]. Second, research in this domain is primarily aimed at finding drivers behind the choice and use of certain communication channels and not behind the source of information. However, the increased networked character of communication processes calls for an understanding of the specific information sources used to receive information from.

The aim of this paper is to provide the first exploratory insights to address these two voids in the available knowledge. The focus of this paper is on which channels and sources businesses use during their search for government information. By doing this, we provide a first insight in the world of the Small and Medium Sized Enterprises (SMEs) concerning their information gathering process in the G2B-context. Furthermore, a network perspective seems valuable to increase our understanding of G2B-interactions and specifically the information source and channel choice of businesses [5]. In addition, we focus on interactions with nature of relationships, channel choice, and source choice.

The second section of this paper provides some theoretical background. The third section discusses the method and next the results will be presented. The final section will provide conclusions and discusses implications for future research.

2   Theoretical Background

This section provides some theoretical background, and thereby propositions, regarding the G2B-context and is built on three elements: (1) changes in the external environment, (2) source and channel choice and (3) nature of the relationship, which partly explains the interaction between channel and source choice.

2.1   Building Blocks for Interactions: Sources, Channels and Relationships

Sources. During the last decades organizations underwent rapid and revolutionary changes [9]. Major developments in the organizational landscape are the changing connection between firms [9] and the emergence of (global) network forms of organizations [10]. Information exchange is now fundamental to relationships [11].

Monge and Contractor [12] argue that network organizations are organized around complex webs of exchange and dependency relations among multiple organizations. This implies that the organization turns into a superorganization with strong links to other organizations and whose main function is to link organizations and coordinate their activities. Some [e.g. 13] even argue that network organizations create so-called boundary-less organizations whereby the boundaries of the internal organizational network and the external network become increasingly blurry. One of the main components of a (global) network organization is that external (communication) relationships are flexible, according to organizational needs and are not bounded by horizontal or vertical structures [10].

Other major developments that turned the organizational landscape into a network society are changes in technology [14]. The rise of the Internet has facilitated media such as websites, and now social media (e.g. Twitter and Facebook), that are often labeled web2.0 [15]. However, these new media are not replacing the old media, but are an addition to the existing channels [16]. For example, young people often use multiple sources at the same time [17] and many people often use sequences of media rather than isolated choices [18]. Finally, people often switch between receiving information passively and seeking it actively in one search process [19]. Hence, multi-directional flows via electronic and interpersonal media (partly) replace uni-directional flows via the mass media. This phenomenon is labeled "mass self-communication" [20]. Hence, organizations increasingly use sophisticated communication technology to coordinate and communicate in these structures [10]. The growing importance of information exchange and relationship building is likely to impact the media chosen to communicate within and between organizations. Structural changes in the organization, due to network effects, will for example impact the physical proximity of employees; an increase in distance leads to decreased probability of communication [e.g. 20].

This implies that the position of government in relation to businesses is changing and thereby affects the distance between the two. Research shows that intermediaries become increasingly important in the G2B-context [22]. They fulfill different roles in G2B-interaction and can be seen as important partners in optimizing services towards businesses [23]. Reasons to bring in intermediaries from the business point of view are complexity in the issuing of laws, rules and technology [24], but also an increasing focus on primary products and processes and increasing efficiency [25; 23]. For governments, the reasons to use intermediaries are reducing the amount of contact and data collecting points [26]. In these cases, intermediary organizations act as formal intermediaries (e.g. accountants who mediate the G2B-interaction). However, not only formal intermediaries, but also social intermediaries (e.g. friends, colleagues) seem to fulfill an important role in G2B-interaction [4].

The information source in the organizational context refers to human or organizational sources and can be divided into two major categories [27]: external and internal. An internal source is located within the organizational boundaries (however blurry) either at levels above, below, or equal to the actor. External sources are those outside the organization. External sources in our context of research can be governmental agencies, expert organizations and personal network of employees [4].

So as a consequence the business context is getting more complex and networked and technology facilitating closer links between organizations, we can infer that businesses search for information in their external network instead of contacting the government directly. Moreover, other parties in the external network have an increasing important role to fulfill in G2B-interaction. This leads to the following proposition:

> *#1 Besides having direct contact with governments, businesses make use of intermediaries to get governmental information.*

Keeping in mind that (1) businesses make use of both governmental agencies and intermediaries to get governmental information and that (2) the growing importance of information exchange in a relationship is likely to impact the media chosen, we can infer that the choice of a channel relates to the chosen source to have contact with. The next paragraph provides some existing theoretical findings.

Channels. The channel refers to: "the means by which a message is sent by a source or obtained by a receiver" [30, p.13]. In this case channels are equal to media. Examples of channels are face-to-face, e-mail, website and mail. There are different perspectives on channels and channel choice in the existing literature. According to the Media Richness Theory (MRT) [31] employees make rational channel choices during information processing. They make channel choices by taking their tasks in consideration, because channels vary in capacities and some channels are more suitable for certain tasks than other channels (e.g. task/medium fit). Other theories (e.g. Social Influence Model, Symbolic Interactionist Perspective) argue that channel and task characteristics are socially and subjectively constructed and less rational, but influenced by factors such as context (e.g. distance, time) and the symbolic meaning conveyed by the channel [32; 33], and finally communication capability constraints (e.g. communicator, recipient and organizational characteristics) and normative contingencies (e.g. cultural norms and role and institutional expectations) [34]. Moreover, we can infer that businesses use different channels for contacting different sources. This leads to the following proposition:

> *#2. Businesses use different channels to contact sources.*

Characteristics of Relations with Sources. Given that organizations are operating in an increasingly relational context of interconnectedness, one can imagine that organizations establish connections and exchanges with other organizations in order to survive [35]. Oliver [35] pointed out that there are several different contingencies for relationship formation between organizations: necessity, asymmetry, reciprocity, efficiency, stability and legitimacy. Applying this to the G2B-context it is likely that businesses establish relations with governmental agencies because of necessity; the relationships are required. For example, businesses must pay taxes in order to meet regulatory requirements; the relationship with the Tax Office is non-voluntary. In contrast, it is likely that the relation with a personal source is perceived as voluntary; it is not a required relation. This leads to the following proposition:

> *#3. Businesses have different types of relations with different sources.*

Summarizing, we can infer that businesses contact different sources, through different channels and have varied types of relations with the contacted sources. The next section focuses on possible interactions between these three building blocks.

2.2   Interactions between Sources, Channels and Relations

So far, we pointed out that: (1) businesses use different sources while searching for governmental information, (2) businesses use different channels to contact varied sources, and (3) businesses have different types of relations with these sources. In this section we look for interactions between these three building blocks.

First, not only characteristics of the employee and its environment are vital factors of channel choice, but also characteristics of the other party (in our context is the other party an information source) are important influencers regarding channel choice [34]. This implies that the channel choice of an employee partly depends on the (perceived) characteristics of the chosen source. Hence, we propose that channel choice interplays with source choice. This leads to the following proposition:

> *#4. Businesses use different channels to contact different sources.*

Keeping in mind that environmental factors (e.g. social influence, recipient and organization characteristics, and expectations) influence channel choice [e.g. 32 - 34], we can infer that also nature of a relationship could influence channel choice. For instance, the relationship between a business and the Tax office is a required one (the business has to pay taxes) whereas the relation between a business and a (financial) advisor is likely to be of a more strategic nature. Subsequently, we postulate the following proposition:

> *#5. Different sources are characterized by different types of relationships.*

Third, regarding the MRT [31] people choose a channel suitable to their task. In our context, the task can be considered as type of a relation with a source. For instance, an employee wants to contact an external colleague. They have an informal, voluntary type of relation. It is likely that an employee who is contacting a personal source chooses a suitable channel, for instance the telephone. It seems very unlikely that this employee chooses a more formal channel (e.g. a letter). Therefore, we propose that type of relation relates to channel choice:

> *#6. Businesses use different channels to contact different sources with different relationships.*

3   Research Method

In order to examine the propositions we conducted a survey among Dutch SMEs (from self-employed up to businesses with a maximum of 249 employees). We gathered data in February 2011 by using an electronic questionnaire. The respondents for this study needed to be involved in the strategic issues of their business, because

external sources tend to become more important at higher levels in the organization [e.g. 28]. We invited 6850 respondents from a commercial online panel to fill out the questionnaire and 1284 respondents started the survey, some respondents (N=263) were filtered out based on the fact that they were not involved in the strategic issues of their business, others (N=348) didn't complete the questionnaire and finally 10% of all invited respondents completed the survey (N=673). 39% of the respondents were women and 61% men. 28% were self-employed, and 47% of the sample were small businesses and 25% medium sized businesses. Compared to information from the Dutch Statistical Office, there is a slight overrepresentation of the medium sized businesses. Results should be interpreted accordingly. The thirteen sources that were mentioned most often were included in the analysis. Furthermore, we used the following channels: face-to-face, telephone, e-mail, mail and Internet (WWW). Regarding nature of the relationship we formulated four different natures: (1) required, (2) voluntary, (3) practical and (4) strategic. For each source we asked the respondents for their channel use and their perception of the nature of the relationship.

4   Results
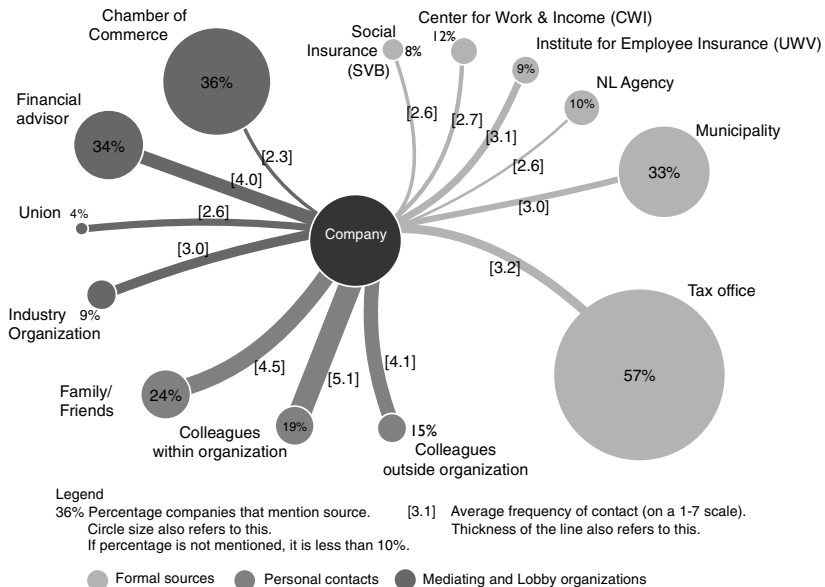
4.1   General Overview

Fig. 1. The most important sources for businesses to gain governmental information

Figure 1 above shows the thirteen most mentioned sources in our research. Regarding formal government sources the Tax Office (57%) and the Municipality (33%) were most mentioned by businesses to have contact with. Both were contacted a few times in the last several years, respectively with an average frequency of 3.2 and 3.0. The Chamber of Commerce (36%) with an average frequency of 2.3, which is sporadic, is the most mentioned source concerning Lobby sources. Besides, the Advisor (22%) also is a relevant source for businesses and is contacted a number of times. Last, regarding the personal network 22% of the businesses mentioned family/friends, 15% external colleagues and 12% mentioned internal colleagues. All personal sources have a high average frequency compared to other sources (respectively 4.5. 4.1 and 5.1).

We can deduce from these results that besides having direct contact with governments, businesses also make use of other kinds of sources (e.g. lobby. intermediary and personal sources). This supports our first proposition. In addition, some sources (e.g. Tax Office) are often mentioned by businesses; a lot of businesses contact these sources for information. On the other hand there are sources (e.g. internal colleagues), which are frequently used; few businesses contact these sources but when they use these sources they make extensive use of them. Hence, businesses use different sources in varied ways. This implies that sources have different functions or roles.

Next, which channels do businesses use while searching for governmental information? Table 1 presents the channels businesses use when they contact sources. Most businesses use e-mail (31%) to contact their sources. Another channel that is often used is the telephone (28%). Face-to-face (16%) and the Internet (18%) are in the middle and the mail (4%) is the least often used channel.

Table 1. The channels businesses use while searching for governmental information

	Channels (%)				
	Face-to-face	Telephone	WWW	E-mail	Mail
General channel use	16%	28%	18%	31%	4%

Table 2 below shows how businesses describe their relationships with sources in terms of nature. Most relationships can be described as practical (43%) or required (34%). Very few relationships in the G2B-context can be described as strategic (6%) and some relationships are voluntary (17%).

Table 2. Perceived nature of relationships with sources

	Natures (%)			
	Practical	Strategic	Voluntary	Required
Described natures	43%	6 %	17%	34%

So, the results show that businesses use different channels and have different types of relations with sources. These findings support both the second and third propositions. The next section focuses on interactions between channels, sources and relations.

4.2   Interactions between Channels, Sources and Relationships

Channels and Sources. Table 3 shows which channels businesses choose regarding to their source choice. Concerning the formal governmental sources the telephone is often used to have contact with these sources; for instance, 36% uses the telephone to contact the Tax Office and 28% for contacting the Municipality. Besides, 27% have contacted the Municipality by face-to-face. In contrast, 25% use WWW when they choose the Tax Office as a source. Remarkably, both intermediaries and personal sources (e.g. family) are relatively often contacted by F2F (respectively 33% and 49%) and telephone (respectively 28% and 29%). The same channels are used to contact the Union: face-to-face (30%) and telephone (26%).

To summarize, we found that businesses use different channels to contact sources in their information seeking process in the G2B-context. This supports the fourth proposition. In general we observe that, for instance, face-to-face is more used during interaction with personal sources compared to the more formal sources.

Table 3. Source-Channel Selection

Source	Channels (%)				
	Face-to-face	Telephone	WWW	E-mail	Mail
Formal government					
Tax office	7%	36%	25%	15%	18%
Municipality	27%	28%	15%	20%	10%
CWI	13%	30%	24%	23%	11%
UWV	7%	41%	23%	16%	14%
SVB	8%	39%	20%	18%	16%
NL Agency	10%	22%	21%	26%	21%
Intermediaries					
Advisor/Accountant	33%	28%	2%	28%	9%
Personal network					
Internal colleagues	52%	23%	1%	23%	1%
External colleagues	38%	27%	6%	27%	2%
Family/Friends	49%	29%	2%	18%	3%
Lobby					
Chamber of Commerce	25%	25%	21%	17%	12%
Union	30%	26%	12%	19%	14%
Industry Organization	13%	25%	21%	29%	12%

This observation implies interplay between channel and source choice. Hence, the next paragraph focuses on this interplay by looking at interactions between nature of the relationship and channel and source choice.

Type of Relationships and Sources. Table 4 shows how businesses describe their relationships with different sources in terms of nature. It is obvious that the relationship with the Tax Office, as well as with the Municipality is described as practical (43% and 42%) and required (46% and 38%). The relationship with

per-sonal sources, for instance with external colleagues, is described as practical (45%) and voluntary (39%). Contact with the Chamber of Commerce (Lobby) and the Intermediaries are described as practical (44%, 46%) and required (40% and 33%).

Table 4. Nature of a relationship regarding source choice

	Natures (%)			
	Practical	Strategic	Voluntary	Required
Formal government				
Tax office	43%	7%	5%	46%
Municipality	42%	7%	13%	38%
CWI	43%	7%	21%	29%
UWV	42%	8%	10%	41%
SVB	42%	5%	11%	42%
NL Agency	35%	15%	24%	26%
Intermediaries				
Advisor/Accountant	46%	4%	17%	33%
Personal network				
Internal colleagues	46%	4%	31%	19%
External colleagues	45%	6%	39%	11%
Family/Friends	44%	6%	45%	5%
Lobby				
Chamber of Commerce	44%	5%	10%	40%
Union	26%	3%	14%	57%
Industry Organization	45%	4%	25%	25%

We can deduce from the results above that businesses have varied perceptions of nature regarding their relationships with different sources. Especially relationships with personal sources are perceived as practical and voluntary. In contrast, relationships with other kinds of sources are perceived as practical and required. Alltogether, we found support for the fifth proposition that businesses choose sources because of the nature of their relationship with a source.

Channels, Sources and Type of Relationship. In order to gain insight into how the nature of the relationship and channel choice are related to each other, we looked at similarities between relationship characterization and channel preferences for each source. In order to establish the degree of similarity we used Dice (also known as Czekanowski or Sorenson) as a proximity measure. This measure compares the number matches to the number of non-matches while joint absences are excluded from consideration. The measure varies between 0 and 1, where 0 signifies no similarity at all and 1 signifies perfect similarity. When many respondents combine e.g. face-to-face with a practical relationship for the sources they use, the proximity level is high. As such we abstract from the specific sources that respondents use. By comparing the proximity measures between each channel and type of relationship we are able to identify interactions with regard to the information seeking process.

The results of the analysis are presented in Table 5. The results show when a relationship with a source is described as practical or required, face-to-face is the channel which businesses use, with a value of respectively 0.55 and 0.49. E-mail (0.49 and 0.41) and WWW (0.38 and 0.40) also are used to some extent in practical and required relationships. In addition, businesses use the telephone when a relationship with a source is described as practical (0.63) or voluntary (0.55). Mail is sometimes used in a required relation (0.37).

Table 5. Proximity matrix regarding nature of a relationship and channels

	Channels				
	Face-to-face	Telephone	WWW	E-mail	Mail
Nature of relationship					
Practical	.55	.63	.38	.49	.30
Strategic	.14	.17	.14	.15	.12
Required	.39	.55	.40	.41	.37
Voluntary	.49	.40	.22	.38	.11

Interactions were found regarding nature of the relationship and source and channel choice. This supports our last proposition (#6). In summary, practical and required relationships with sources (e.g. formal government and intermediaries) interact with the telephone and to some extent also with e-mail and WWW. Practical and voluntary relationships with sources (e.g. personal network) show proximity with face-to-face as a channel. In general, as expected the interaction concerning mail is relatively low. However, it is remarkable that the interaction for WWW is relatively low and, in contrast, the interaction regarding the telephone is relatively high.

5   Discussion and Conclusions

This paper examined the information seeking behaviour of businesses in the G2B-domain. Instead of focusing on the interplay between task and technology characteristics we focused on the interrelation between sources, the nature of the relationship with the source and the channel that is used to communicate. By doing that, this paper takes a new approach towards the understanding of information seeking behavior of SME's in a G2B-context.

Limitations. Before we will present our final conclusions we would like to mention some of the limitations of this study. Because we asked one person per organization we get information from that specific person within the organization. Another person in the same business, even in the same management, could have other contacts regarding the G2B-context. So even though we asked managers responsible for the strategic management issues, we should be careful when interpreting results. A second limitation is that we looked at differences between sources, channels and relations only. More factors may be at play. Although channel choices may be more

complex than what we studied here, we do feel that our approach towards contingent choices does shed a new light towards understanding the information seeking behavior of businesses in a G2B-context. A final limitation is that we studied the situation in one country. Hence, differences between countries remain unsearched.

Discussion and Conclusions. The first three propositions focused on the variation in the choice of channels (#1), the use of channels (#2) and the nature of the relationship between a business and a source (#3). We conclude that besides having direct contact with governments, businesses make use of intermediaries to get governmental information. We found, in accordance with previous studies [22; 23], that the intermediary (e.g. advisor) is a very versatile and therefore notable source in the network of businesses in the G2B-context. Thus, for governments the intermediary is the party in the network of G2B-interaction to focus on and to work with. Others already argued that intermediaries can be seen as a new kind of service delivery channel and are of great value in optimizing G2B-interaction [36]. However, not only formal parties seem to fulfill an important role here, but also informal parties (e.g. personal sources) are vital information sources for businesses. This implicates that governments should also focus on and work with informal intermediaries. We also found support regarding the second and third proposition. The results in this study show that businesses use various channels to contact sources. Besides, we found that businesses have different relationships with sources, which is in line with Oliver [35].

The second set of three propositions focused on the interaction between the building blocks. Results of the empirical study show that business choose different channels for different sources (#4), have different types of relations with different sources (#5) and use different channels to communicate with sources they have a different type of relation with (#6). Thus, we can conclude that there is interplay between source, channel and type of relationship in the information seeking process of businesses in the G2B-context. These interactions are important because together they provide an important insight in the information seeking behavior of businesses nowadays. Moreover, the findings imply that the choice of channels not only depend on the factors found in earlier research, but that the choice of sources is a crucial factor that interacts with channel choice. From a theoretical standpoint the results of this research offer the possibility for further exploration. The mechanism of interaction turns out to be more complex than a simple task-technology fit. Further research can provide insight into the factors that make the relation between a business and their sources contingent.

We made a first step towards the understanding information seeking behaviour of businesses in the G2B-context by looking at the interaction between channels, sources and nature of a relationship with a source. The finding that source and channel choice interact is vital information for governments to improve their service provision towards this complex target group. More specifically, taking into account that the context of G2B-interaction is very complex and networked, and that businesses use various sources to gather governmental information, it sounds wise for governments to integrate both channel and source choice in their service provision strategies towards SMEs. However, more research on this topic is needed before a

well-balanced and effective strategy can be implemented. Our study is among the first researches in the context of businesses itself and that elucidates the importance of the interplay between channel and source choice in the G2B-context.

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