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# Government Information Quarterly

journal homepage: [www.elsevier.com/locate/govinf](http://www.elsevier.com/locate/govinf)

## Efficiency through digitalization? How electronic communication between frontline workers and clients can spur a demand for services

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### ARTICLE INFO

#### Keywords:

E-government  
ICT  
Electronic communication  
Digital service provision  
Street-level bureaucracy  
Welfare services  
Perceived efficiency

### ABSTRACT

The increasing use of electronic government comes with great expectations of efficient service provision. However, frontline workers who use the information and communication technologies (ICTs) and implement digital services have received less attention. This article examines how frontline workers in the Norwegian Labor and Welfare Administration (NAV)<sup>1</sup> perceive electronic communication with clients in terms of its efficiency. The empirical data consist of interviews with frontline workers in NAV, who argue both for and against the efficiency of electronic communication. The frontline workers find that electronic communication saves them time, but also makes them more available to clients. While it is desirable that services are available, this can also reduce the cost to clients of seeking services. Based on a street-level perspective, I argue that the availability of services through electronic communication can spur a demand for services. This implies that there is a potential resource trade-off between efficient services and available services.

### 1. Introduction

Governments are investing in digital technologies, often with high hopes and using substantial resources, in order to achieve efficient public services. Frontline workers are expected to provide efficient services, while implementing the electronic government, but how do the frontline workers perceive the efficiency of digital service provision?

Electronic government (e-government) refers to the use of information and communications technologies (ICTs) to administer and provide public services (Garson, 2006; Snellen, 2005, as cited in Buffat, 2015). Recognizing the opportunities that lie in the electronic organization, dissemination and exchange of information, it has been argued that such technologies can reduce the administrative burden, support bureaucratic coordination, and facilitate interaction with citizens (Cordella & Tempini, 2015; Fang, Tarshis, McInroy, & Mishna, 2018; Høybye-Mortensen, 2019). Both researchers and governments often consider digital service provision, i.e. the use of digital technologies to deliver services, to be more efficient than traditional services (Axelsson, Melin, & Lindgren, 2013; Bindu, Sankar, & Kumar, 2019; Devlieghere, Bradt, & Roose, 2016). However, the frontline workers who use the technologies are often overlooked in the literature on e-government (Høybye-Mortensen, 2019; Lindgren, Madsen, Hofmann, & Melin, 2019; Tummers & Rocco, 2015). This critique of de-contextualization encourages a

bottom-up approach to e-government, such as the street-level perspective, which takes frontline work as its point of departure.

Street-level bureaucrats are frontline workers who provide public services, meet citizens, and exercise discretion (Lipsky, 2010). Their perception of available resources is important because it shapes their responses to different situations, for example which clients to prioritize, which, in turn, can shape the service that is delivered (Lipsky, 2010; Maynard-Moody & Musheno, 2003). In fact, digitalization refers to both the technical and social aspects of applying digital technologies in a context (Lindgren et al., 2019). It is important to look at the context because ICTs are more than just “objective” technologies; both the form of organization and the enactment of technologies shape the final service outcome (Fountain, 2001). Whereas the street-level literature is often concerned with discretion in digital work (e.g., Bovens & Zouridis, 2002; Buffat, 2015; Busch & Henriksen, 2018), the actual digital interaction between frontline workers and clients remain underexplored (Lindgren et al., 2019; Marston, 2006).

In this article, I turn the expectation of efficient service provision into an empirical question that is approached from the bottom up. Based on the example of the Norwegian Labor and Welfare Administration (NAV), I ask: How do frontline workers in NAV experience electronic communication with clients in terms of efficiency? Its overall high ranking in different measurements of digitalization make the Norwegian public

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<sup>1</sup> Abbreviations in the article: the Norwegian Labor and Welfare Administration (NAV).

sector a highly reputed example of e-government in Europe (Organisation for Economic Co-operation and Development, 2017). NAV serves as a relevant example because of its extensive commitment to digital service provision (Ministry of Local Government and Modernisation, 2016). The objective of this effort is to use cost-efficient communication channels to be able to allocate more time for job-oriented counseling of vulnerable clients. For that reason, I understand efficiency in empirical terms, as using technologies to save time for counseling. NAV's new platform for electronic communication is the concern in this article. It is a channel for job-oriented counseling and one of the cornerstones of the provision of efficient digital services.

The article is structured as follows. In Section 2, I present the street-level perspective, which I use to examine electronic communication from the bottom up. In Section 3, I explain the research context and methods, including how I used thematic analysis to explore contradictions in the data. The findings presented in Section 4 show an empirical ambivalence, whereby frontline workers argue both for and against the efficiency of electronic communication. While frontline workers find electronic communication time-efficient, it also makes them more available. In Section 5, the discussion section, I argue that this perception of frontline workers being more available can trigger a demand for services. In Section 6, I conclude and present new areas for research.

## 2. The street-level perspective

Street-level bureaucrats – such as the police, teachers, and social workers – are frontline workers, who make decisions that concern our welfare (Lipsky, 2010). With substantial discretion and subject to limited supervision, street-level bureaucrats interpret and deliver policies through their decisions. The room for discretion means that there is an inherent autonomy in street-level work. However, street-level bureaucrats also have certain structures in common, which can limit frontline actions. Vague rules, ambiguous policies, and limited resources add to the conflicting pressures of street-level work and shape the perceived realities to which the workers respond (Lipsky, 2010).

Street-level bureaucracies are prone to resource problems, i.e., limited information and time, which, for the individual workers, often result in large caseloads relative to the time available (Lipsky, 2010). These problems stem from how supply seems to pull demand in street-level bureaucracies. The perception of available services forms public expectations of demand, which then forms the demand itself. This means that more clients will seek services (quantitative) and/or demand better services (qualitative), when the service seems to be available. It also points to how demand responds to the *perception* of available services in the public sector. Perception turns demand into a transactional concept that holds more than the demand itself. Demand also relies on an encouraging supplier who signals whether the service is available or not: “It is a function not only of expressions of client preferences but also of government efforts to offer services and to record or acknowledge client responses” (Lipsky, 2010, p. 35). The number of untreated clients in street-level bureaucracies, often described as “unlimited” demand, means that the problem is of an enduring nature. Costs are nevertheless imposed on clients in order to regulate demand, for example, in the form of waiting lines, since street-level bureaucracies do not have the same price mechanisms as the private sector does (Lipsky, 2010).

Lipsky has been criticized for overemphasizing the similarities between street-level bureaucracies, and for not giving enough attention to professionalism (Evans, 2010). While this is an important criticism of the street-level perspective that needs to be kept in mind, the common emphasis on shared structures has contributed to knowledge accumulation in the street-level literature. Limited resources can contribute to conflicting pressures on frontline workers and put street-level bureaucrats at risk of providing insufficient services, because they have to make decisions that can be in conflict with service ideals (Lipsky, 2010). The individual workers often respond to these pressures by simplifying their perspective on work, environment, and clients in order to save resources

(Lipsky, 2010). For example, the simplification of clients can lead to them being categorized in large groups, which can save time for frontline workers. These work patterns are known as coping mechanisms. Coping mechanisms have received considerable attention in street-level research but seem to be underexplored in digital street-level work (e.g., Busch, Henriksen, & Sæbø, 2018; Tummers & Rocco, 2015).

It has been argued that attempts to control discretion can add to the pressures on the frontline. Evans and Harris (2004) argue that the proliferation of rules can lead to more use of discretion, suggesting that it is difficult, from the top-down, to formulate efficient, standardized responses to street-level situations. Moreover, providing street-level bureaucrats with discretion has been shown to increase the willingness to implement policies (Tummers & Bekkers, 2014), which suggests that discretion can contribute to efficient digital welfare services. Maynard-Moody and Musheno (2003, p. 115) show that street-level bureaucrats are willing to trade “bureaucratic failure”, e.g., in the form of performance measures, for “client success”. Such actions do not exist, however, outside the street-level structures; pragmatic improvisation is rather a response to reconcile the ideal world of policy with the realities on the street (Maynard-Moody & Musheno, 2012). While efficient service provision is often associated with management goals, there have been warnings against treating street-level bureaucrats and managers' interests as categorically different (Evans, 2010).

While important studies have been carried out on both discretion and coping, my main concern in this article is with the structures that underpin these responses, i.e., the chronic resource problem that forms the basis for several conflicting pressures in frontline work.

## 3. Data and method

### 3.1. Research context: NAV

NAV was formed through the merger of the public employment service, national insurance administration and municipal social services, which took place in 2006. The objective of the merger was to provide coordinated and integrated welfare services for clients in the form of a “one-stop-shop” (Askim, Fimreite, Moseley, & Pedersen, 2011). The merger has resulted in a large organization with frontline workers with diverse professional backgrounds, both social workers and non-social workers. The local offices' main task is job-oriented counseling of clients, which reflects the welfare-to-work goal of the service provision.

In the white paper “NAV in a new era – for work and activity”, client numbers are expected to increase due, among other things, to an ageing population, labor market changes, and possible immigration (Ministry of Labour and Social Affairs, 2016). This expected future requires “doing more for less”. In order to make the services more efficient, NAV has taken new channels into use (e.g., electronic communication, self-service solutions, call center communication) and introduced strategies for how to use the different channels. The purpose of NAV's channel strategy is to use cost-efficient communication channels to be able to allocate more time for job-oriented counseling. It is operationalized through service procedures that establish which channels are to be used for different requests (e.g., benefits, counseling, etc.) and which department responds to them. The purpose of digital service provision is not to replace all face-to-face contact but to reallocate resources. Put in simpler terms, resourceful clients are referred to cost-efficient channels to save time that can be spent on the counseling of vulnerable clients.

The electronic communication platform Modia provides both frontline workers and clients with an online messaging function, and it is one of the main channels for service provision in NAV. Modia changes service provision in NAV because it provides the client with direct access to their frontline worker, which is new for most clients. Despite its resemblance to an online chat, the frontline workers use Modia as an electronic inbox and answer messages when available. The channel is intended for use in job-oriented counseling, i.e., it should not be used for enquiries about benefits. The frontline workers also write summaries of

phone and in-person conversations in the electronic communication channel. All messages are organized in conversation threads. Chronological records of all of NAV’s (governmental) communication with the client are therefore stored in one place, regardless of who has worked on the case. During the data collection, the frontline workers used both an older and a newer version of Modia. In this article, I use Modia as a collective term for both versions of the electronic communication.

3.2. Method and informant selection

This article draws on semi-structured interviews with 30 informants from two large NAV offices, some of whom have been interviewed more than once. The semi-structured interviews offer depth in the form of open-ended questions, which are suitable for exploring both frontline experiences and the setting for the interaction with clients, but with some thematic structure to ensure coherence across interviews.

The article forms part of the research project Frontline innovations in the welfare services (INNOWEL). The NAV offices were selected on a project level and in cooperation with the Norwegian Directorate of Labor and Welfare. The selection criteria included offices that were undergoing change processes and wanted to learn more about them. While I focus on frontline experiences rather than case comparisons in this article, the selection has resulted in offices that are large by Norwegian standards. Whereas Modia is used in all NAV offices, office size can be an important factor for achievements of objectives (Fossestøl, Breit, & Borg, 2016). In the NAV-reform, for example, small and medium-sized offices did better than larger offices in terms of goal attainment (Fossestøl et al., 2016).

The selection criteria for informants include frontline workers who had (a) client contact and (b) used Modia for electronic communication. Most of the informants are counselors, as shown in Table 1. The counselors’ main task is job-oriented counseling of clients. Their portfolios comprise clients with diverse needs, ranging from clients in need of social services to clients in need of employment services. The reception workers differ from the counselors, as their portfolios often comprise “easier to place” clients. Their reception work nevertheless also includes service provision for a broad range of walk-in clients. The middle managers who were included have some client contact, and they also perform coordination tasks and are responsible for different fields. I use “frontline worker” as a common term for all these informants, including both professionals and non-social workers and emphasizing their role in service provision.

Ten of the informants have vocational training in social work or work and welfare studies (bachelor’s or master’s degrees). The latter is a Norwegian vocational education with the emphasis on work inclusion. Most of the remaining informants have higher education in other social sciences (bachelor’s and master’s degrees), while some have other forms of vocational training. With six males in total, females were predominant among the informants. The age distribution, presented in Table 2, shows that many of the informants are between 31 and 40 years of age.

The interviews lasted about an hour each and were conducted during the period from November 2017 to September 2019. The informants were asked about several aspects of digital service provision, including their use and experience of electronic communication, as shown in Table 3 Information about the interviews.

We have notified the Norwegian Centre for Research Data about INNOWEL, which has assessed and accepted our data collection and

Table 1  
The informants’ position in NAV.

The informants’ position in NAV	
Position	Number of informants
Counselor (job-oriented follow-up)	22
Reception worker	4
Middle manager	4

Table 2  
The informants’ ages.

The informants’ ages	
Age group	Number of informants
20–30	7
31–40	13
41–50	7
51–60	1
61–67 (i.e., the Norwegian retirement age)	2

Table 3  
Information about the interviews.

Information about the interviews	
Topic	Explanation
Background	Details about the informant’s background, such as age, education, work experience, their current position, and caseloads.
The frontline workers’ use of ICT	The informants’ description of different ICT systems, and of how the informants use them in their work.
Frontline experiences of digital service provision	The informants’ experiences of digital counseling and decision-making. This includes how tasks, practices, and the interaction setting are changing in digital service provision.
Frontline workers’ experience of the channel strategy	The informants’ experience of the channel strategy. This includes the overall benefits and challenges of digital service provision in this context.
Differences between traditional and digital service provision	Discussion of the differences between traditional and digital interaction with clients, and how it influences frontline work.

storage of personal data. The Norwegian Directorate of Labor and Welfare has exempted the informants from their duty of professional secrecy. While all informants are anonymous, the frontline workers have been identified with individual numbers in this article (e.g., I1, I2, I3, etc.). Informed and written consent was obtained from all informants. The interviews were audio recorded and transcribed.

3.3. Description of data analysis: analyzing contradictions in the data

Initial readings of the interview transcripts showed some contradictions in the empirical data: the informants argue both for and against the efficiency of electronic communication, which I refer to as an “empirical ambivalence” in this article. Previous research has pointed to the benefits of exploring contradictions as a means of reducing confirmation of consensus and the reproduction of existing research (Alvesson & Sandberg, 2013). In order to explore the empirical ambivalence, I conducted a thematic analysis using an inductive orientation (Braun & Clarke, 2006). Here, I use “orientation” to emphasize how data are produced in interaction with informants and are subject to previous knowledge. The thematic analysis is well-suited to exploring patterns, such as the empirical ambivalence that emerged in the initial process of data familiarization (Braun & Clarke, 2006). The data were coded in terms of differences, meaning that differences between the informants’ perceptions of efficiency were coded as separate themes, with sub-codes for how informants justified their view. While an untainted separation of data and theory is difficult to achieve, the codes are primarily empirical rather than theoretical. The themes were then reviewed and renamed.

Fig. 1 is a simplified presentation of the coding logic and the final themes (1a, 1b, 2a, 2b). The two initial categories divide the data between statements (1) in support of, and (2) critical of the efficiency of electronic communication. The next subcategories relate to how informants justify their view. The statements in support of efficient electronic communication formed the basis for two of the final themes: explanations related to ‘direct communication’ (1a) and to the

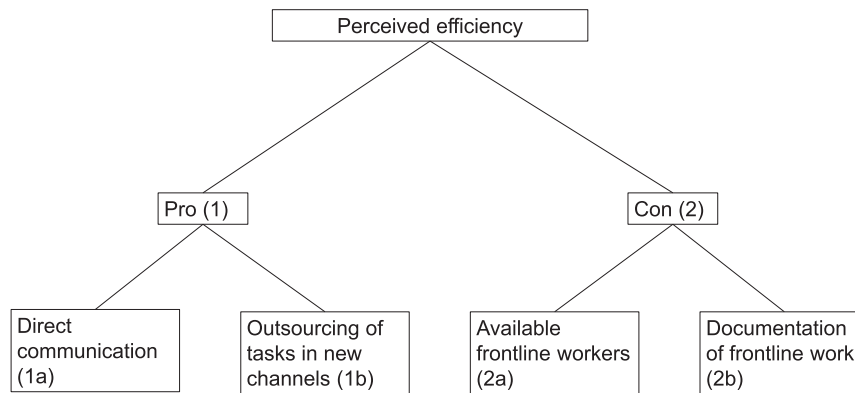


Fig. 1. The final themes.

‘outsourcing of tasks in channels’ (1b). The arguments against efficient electronic communication formed the basis for two additional final themes: explanations related to ‘available frontline workers’ (2b) and ‘documentation of frontline work’ (2c).

#### 4. Findings

In the findings, I first present the frontline workers’ arguments for the efficiency of electronic communication, both as a function of Modia and in the broader context of digital service provision in NAV. The channel strategy is an important part of the context, as it specifies how electronic communication should be used. The second part of the findings, Section 4.2., shows how electronic communication can be time-consuming. In combination, the sections represent an empirical ambivalence, as the same informant can argue both for and against the efficiency of service provision. Finally, in Section 4.3., I show that the informants agree that the resource problem still exists.

##### 4.1. The frontline argument for the efficiency of electronic communication

The frontline workers’ experience of electronic communication is generally positive. One informant even describes the office as enthusiastic about the digitalization process. The frontline workers express that the use of electronic communication is “efficient” (I6), “time-saving” (I26), and makes it “easier to communicate more quickly” (I7).

We have experienced that “Wow, it was this simple.” The feeling that things go faster (...) Things that took 20 minutes now take one minute (I17).

The frontline workers’ experiences of saving time center on three main arguments. First, certain tasks have been outsourced in the channel strategy. Centralized call centers now handle certain inquiries and the clients can use digital self-service solutions. One informant described this as “a way of filtering out requests” (I19). Second, service procedures have been established to operationalize the channel strategy. The procedures define responsibilities in NAV, i.e., who answers what requests. Previously, the frontline workers had to answer a broad range of enquiries, including questions about benefits. Now, their operative range is limited to job-oriented counseling, which seems to have reduced the uncertainty and time it takes to find the correct answers:

I feel secure and more confident when I come to work now. There was an uncertainty we had before, when you answered questions about sickness benefit and social security and... We sort of sat and traded with large commodities. (I11)

Third, direct communication saves time. The informants find that electronic communication takes less time than calling or meeting a client does. Rather than sending letters and waiting for appointments, the

frontline workers send electronic messages for swift clarification. This provides updated information and can shorten the assessment process.

You are spared from having to call – no answer – call – no answer. If you call enough times, you can complete the task. But then they call back the next day because they have seven missed calls from NAV. Then it is not completed (I12).

The example shows how calling can take more time than the conversation itself. Reaching the client can be hard and several attempts may be required. At some point, the frontline workers must proceed with the task, regardless of whether contact has been established. If the client returns the call, s/he reaches the centralized call center, which forwards a message to the frontline worker in question. Electronic communication, on the other hand, enables direct communication without intermediaries. The frontline workers also argue that direct communication removes “noise” (I14), allows them to answer messages in-between tasks and makes it easier to plan better meetings (e.g., deciding the agenda beforehand).

The proper use of channels is intended to provide “the right answer at the right time”, which shows how arguments for efficient electronic communication and better services are often intertwined. The frontline workers argue that Modia gives clients a choice of when and where to contact NAV, as well as more frequent interaction. Other informants explain that this does not reduce in-person meetings:

I would say that I have never had as much contact with my clients as I have now. And all the meetings I have now... People believe that we have fewer meetings now that we are digital, but I would say that it is almost the opposite. (I11)

The example suggests that digital service provision does not have to deprive clients of traditional services. Rather, multichannel solutions meet the need for face-to-face meetings for clients who need one, and electronic access makes it easier for digital clients: “it is easier to get to the right place” (I28).

##### 4.1.1. The reception function – the prime example of where time is saved

Most frontline workers refer to the reception function in order to show where electronic communication saves them time. Both NAV offices have reduced their staffed opening hours, which reflects how new forms of communication have changed the apparent need for in-person service. This frees up resources in the form of personnel:

Before, we were fifteen or sixteen people in the reception. Now, we are two. Of course, we have more time to follow up the clients now. Besides this, for the individual counselor, it has not changed our way of working very much (I14).

The traditional reception desks have been closed. Instead, the reception workers now refer clients to cost-efficient channels and

counsel them at the computers in the office. One reception worker explains the intention behind closing the reception desk:

The point for NAV [office name] now is that the client should be in direct contact with his/her counselor. We are not there as intermediaries who write notes and messages to the counselors (I9).

In addition to staffed opening hours, the office is still open for pre-planned meetings and clients can use the computers in the reception area. According to one frontline worker, this has led to there being more “real NAV-cases” (I11) in the reception now.

#### 4.1.2. *Transferring saved time from one task to another*

While electronic communication can save the frontline workers time, it does not ensure that the saved time is spent on vulnerable clients. Some examples suggest that it can be hard to transfer time from one operative area to another:

We have bought ourselves a lot of time through digitalization, so of course we have more time to meet them [the clients]. But with the digital solutions it is very easy just to send them a message (I15).

This example illustrates how electronic communication can be used to conserve resources for purposes other than counseling vulnerable clients. This informant turns to electronic communication, even when there is time to meet clients, which gives her time to work “a bit more on case handling” (I15). This implies that it can be challenging to transfer time from one task to another in the organization. Another example of resource conservation concerns shifting responsibility to the client:

I believe that, in a hectic workday, we could perhaps be tempted to return the ball to the client. Without things being... having been able to produce anything in the case. (I25)

Some informants emphasize that the clients must now take initiatives themselves, as technologies make client-initiated contact and self-service possible. Others express that NAV is not there to “pamper” them (I10). NAV’s new conception of clients assumes that clients are active. This takes place within a “welfare-to-work” context, but the technologies enable the clients to act. The conservation of resources thus points to the timesaving potential of digital services, but it does not ensure that time saved is spent on vulnerable clients.

#### 4.2. *The frontline arguments against the efficiency of electronic communication*

The findings have so far shown that frontline workers experience electronic communication as efficient. It can often take less time to message the client than calling or arranging a meeting. Moreover, the channel strategy and service procedures distribute the work and make their work less ambiguous. The reception is often brought up as a prime example of an area where time is saved, since new communication channels and practices have made it possible to reduce staffed opening hours. However, there is an ambivalent undertone to the argument, as the following section will show. Except for the reception function, the informants seem to find it difficult to show how and where time is saved and used, which raises doubt about how digital service provision gives the individual counselors more time. Furthermore, the frontline workers find that electronic communication makes them more available to clients. Documentation of their work using electronic communication seems to add to the pressures on the frontline.

##### 4.2.1. *Electronic communication makes frontline workers available to clients*

Most frontline workers state that electronic communication makes them more available to clients. Clients’ access to the frontline workers is regarded as positive, but it can also be time-consuming. One informant explains that: “They write to me often. They expect quicker replies now”

(I11). Others suggest that NAV is now “open 24 hours a day” (I8) or describe their website (nav.no) as “NAV’s largest office” (I11).

I believe it is a good thing, but, at the same time, we have become very available and it takes a lot of time (I16).

Electronic communication gives the clients new access to frontline workers. Before the introduction of Modia, clients had to get past some intermediaries to reach their counselors. The clients often had to wait for the frontline workers to contact them. The direct access provided by electronic communication therefore makes frontline workers more available to the clients. One informant explains that clients can now “demand more from them”. (I11). Another informant states that “the more they use it, the more I have to use it” (I16). This makes some frontline workers question how time-efficient digital service provision actually is.

The problem is not really the technology. The problem, in my opinion, is that there are greater expectations of time-saving after the introduction of technology than is actually the case. Because something always turns up! (I8)

In combination with other channels, electronic communication can challenge the workers’ time management: “It is the amount that is challenging (...) and that it comes in in quite a few channels” (I25). Direct access also amplifies an existing challenge, described as:

It is those who yell the loudest that receive help first, but it is not necessarily those who yell the loudest who need the help most (I1).

This challenge is considered universal and predates digital service provision: “Then you are heard, of course. It is like that all over the world.” (I8). The direct access created by electronic communication nevertheless provides new opportunities to attract the frontline workers’ attention. The example suggests that there might be an unintended redistribution of frontline workers’ time and attention. The frontline workers might become more available to digital, but not to all, clients: “(...) it makes it easier to get a hold of me” (I17). While most of their clients are digital, there is a difference in how active the clients are:

I believe that some clients are very eager, but use it in the wrong way. Sending me messages at 11.15 p.m., e.g.: “Did you send in the application?” Moreover, they write in great detail. It is not necessarily the information I need for standard applicants at least (I21).

Electronic communication nevertheless provides more than just access in practical terms, it also contributes to the perception of frontline workers being available. One frontline worker explains how digital clients can be very active in their electronic communication:

They say that “Oh, it is so nice. [I] do not have to wait in line; do not have to wait three or four months for a conversation. Now, we can talk all the time!” (I11)

This example illustrates how the digital interaction setting can trigger new expectations. The waiting line, for instance, is no longer visible to the client online, which can challenge the norms of queuing and reinforce the perception of frontline workers being available. By comparison, the office reception can be crowded, and ad hoc requests are handled “in open space”. Moreover, electronic communication lends itself to another form of interaction:

Previously, we could receive a message in Modia, answer it, and then it took some time before we perhaps got an answer. Now, we answer them and receive a new answer [in return] even before we get home. Then it is like, “Oh shit, now I have to do this too.” It is both positive and negative (...) It becomes more like a chat (I12).

Whereas the messages are often short, the interaction takes the form of an ongoing conversation. This continuous form can lower the

threshold for contact. One frontline worker explains that he deliberately calls Modia “a chat” to make it seem more accessible: “it makes it easier [for clients] to contact [us]” (I27). Moreover, electronic communication removes some of the practical obstacles to traditional contact (e.g., opening hours or transportation to the office), and some informants even argue that it can reduce the social stigma of contacting NAV.

#### 4.2.2. Documentation of frontline work

The use of electronic communication requires new documentation of frontline work, both in the form of the messages themselves and in the form of new documentation requirements. In NAV, the frontline workers are expected to document all contact with clients in Modia. This includes documenting “analogue” activities, such as writing summaries from in-person and phone conversations.

We spend some time on it, on writing, but I am not sure how important it is operationally. Because the medium traps you. You are supposed to write, and write and write and write... but what is the operative value of this? (I18)

Documentation can be time-consuming in itself and will at times involve a duplication of efforts in NAV, as the workers often have to document a case in multiple systems. The task can be intensified, however, by concerns about what and how to write in Modia. Some frontline workers report an awareness of how to express themselves: “I feel as if I perhaps spend more time on notes and similar, because I am aware that the client will see it.” (I16). Electronic communication also comes with new expectations of what language to use:

Digital language is a simple language. You are not writing a long dissertation about Elsa and Ingrid, and with all the fancy words we use in our formal decisions. You are supposed to remove them. You are supposed to write in an active manner, to the client. “You and I.” Not “us” and “NAV said...” (I11)

The informants’ previous experience of digital chats can shape their expectations and use of electronic communication in NAV. Moreover, NAV has endeavored to make its language less bureaucratic and more comprehensible, which contributes to an emphasis on using simple language that resembles “everyday speech”. The digital language can thereby make bureaucratic matters easier to understand and reduce the cost of seeking services through electronic communication, for example in terms of confusion and time. However, additional work can also arise after the messages are sent:

Often, when I write to them, I can experience – I am thinking that this is OK to write – but then I get a lot more questions in return. Sort of, “what do you mean by this?” (I16)

Some informants explain that it is easier to misinterpret people online, which at times can even generate hostile responses from clients. Others find it difficult to describe sensitive matters. The examples show how their documentation can provoke responses from clients, which can entail additional effort for the individual worker.

#### 4.3. Persistent resource problems for frontline workers

Until now, the frontline workers have argued both in favor of and against the efficiency of electronic communication – not as separate ‘pro’ or ‘con’ camps – but rather as two sides of the same story. This section will show how the informants nevertheless agree that the resource problem seems to persist even when service provision is digital.

Despite the increase in full-time equivalents in NAV ([The Norwegian Directorate of Labour and Welfare, 2019](#)), frontline workers are often under time pressure and experience that client portfolios are too large. High sickness absence contributes to this workload. One informant states that they “will never be up to date in NAV” (I16). These experiences suggest that the resource problem persists:

You must do it when you should. It is sort of a mantra... You cannot postpone anything. You must control things all the time because there is so much stuff coming in. When you are away for a day or something like that, it becomes hard because then it piles up. (I25)

One frontline worker even challenges the very notion of “doing more for less”; emphasizing that street-level work is about “having time to take care of the individuals” and that “the digital solution has not solved it” (I18). Another informant uses a message on the information screen in the office’s common area to illustrate the time pressure in the frontline:

Among other things, there is a question [on the screen], and this provokes me a bit: “Are you present in your client’s life when something happens?” I try, but ... [ironic laughter] (I2)

The examples suggest that time constraints are still an issue for the frontline workers and that their work requires prioritization: “following up everyone... that does not happen” (I16).

## 5. Discussion

The findings show that electronic communication is perceived as efficient, since direct communication can save time and tasks can be outsourced in the multichannel solutions. It nevertheless seems hard to identify how this benefits the individual frontline worker. Electronic communication can also be time-consuming. While this might suggest that it is hard to transfer saved time from one operative area to another, frontline workers’ experiences often point to how electronic communication makes them more available. The task of documenting frontline work comes in addition, adding to the pressures on the frontline workers. Taking the experience of persistent resource problems into account, i.e., that digital service provision does not seem to free the frontline workers from large client portfolios and time pressures, it is relevant to take a closer look at some street-level structures.

### 5.1. Creating a potential resource problem through electronic communication

[Lipsky \(2010\)](#) argues that resource problems are chronic. While the informants find electronic communication efficient, frontline workers also acknowledge that it can be time-consuming. Based on this empirical ambivalence, I will argue that electronic communication can entail a resource problem. The use of electronic communication alters the premise for service provision, as the online messaging function provides clients with direct and seemingly unlimited contact with the street-level bureaucrats. The supply-driven dynamic that characterizes street-level bureaucracies causes the chronic resource problems ([Lipsky, 2010](#)). Informants describe Modia as making them more available. When the service seems to be more available, i.e., gives the impression of greater supply, this can pull demand ([Lipsky, 2010](#)). The pull can create a resource problem, however, in which an influx of message forms and electronic communication become time-consuming. Whereas the idea that certain communication channels can generate more “traffic” has been presented before (see for example [Madsen, Hofmann, & Pieterston, 2019](#)), the street-level perspective can provide an explanation for the empirical ambivalence, as a potential resource trade-off between efficient and available services. This means that when service seems more available, it can come at the expense of service efficiency.

Electronic communication gives the clients access to NAV’s frontline workers in the form of direct communication. Previously, clients had to go via intermediaries to reach their frontline worker, respect office opening hours and travel to the NAV office. However, access is also signaled by the new interaction setting. [Lipsky \(2010, p. 117\)](#) argues that the settings in which street-level bureaucrats interact with clients “symbolize, reinforce, and limit their relationship”. For example, the digital language that is used implies a form of informal communication that detaches counselors from bureaucratic language. This can make the

service appear to be more available. Electronic communication can also remove some of the traditional power symbols in an office, which are structured to cue or control clients. For example, instead of addressing the information desk in the reception, clients have direct access to their frontline worker through electronic communication. Rather than waiting in line, the clients can decide when and where to contact NAV, thereby removing some of the street-level bureaucrats' control over "content, timing and space" (Lipsky, 2010, p. 120). This supports the finding by Lindgren et al. (2019), that digital service provision can blur the beginning and end of interaction, which can change traditional perceptions of the encounter. The digital interaction setting emphasizes how demand is a transactional concept. New access and symbolization in electronic communication can reduce the perceived costs of seeking services. This can create the perception of an encouraging supplier, to which the demand responds.

The concept of "unlimited" demand is a matter for debate, however. First, clients register at NAV for a reason (e.g., unemployment) and it has been argued that it is particular needs that drive demand rather than supply. Madsen et al. (2019), for example, show how problems related to information and actions can generate channel traffic, such as problems related to understanding information, the need for explanations, and clients' need to negotiate their case. Lipsky (2010) acknowledges unpredictable increases in demand, as the street-level bureaucracies do not know when and where needs arise, but also that demand becomes meaningless without a responsive supplier. Whereas it is important to recognize need as a reason for contact, needs are to some extent subjective in the context of job-oriented counseling. Second, it is also possible to envisage that electronic communication is efficient enough to reach an assumed point at which demand becomes saturated, i.e., it is not "unlimited" (Lipsky, 2010). The ambivalence in the empirical data nevertheless suggests that resource problems persist, thus providing some support for the argument that they are chronic (Lipsky, 2010).

Individual efforts to conserve resources, i.e., a form of coping mechanism, are responses to the resource problem. The example of the frontline worker who spent saved time on administrative tasks rather than on job-oriented counseling shows how conserved resources can "cushion" unpredictable demand and bureaucratic breakdowns (i.e., high turnover, sick leave, etc.) (Lipsky, 2010). Coping responses can make the service seem less available and can therefore be an instrument through which the individual worker reduces demand. For studies and discussions of frontline workers' coping responses, see for example Tummers and Rocco (2015) and Breit, Egeland, Løberg, & Røhnebak (2020). However, the street-level bureaucrats cannot be perceived as rationing services (Lipsky, 2010). In part, technologies enable a practical conception of active clients in the "welfare-to-work" context, which can serve to legitimize some subtle rationing. This makes outsourcing of tasks to clients possible, such as referring them to online information or digital self-service solutions. Documentation requirements add to the time pressures in the frontline, both in the form of writing the messages themselves and by triggering concern about what and how to write. The pressures mean that there is still a need for individual efforts to conserve resources and to develop coping strategies.

To sum up, I argue that the availability of services in electronic communication with clients can spur a demand for services in street-level bureaucracies. This implies a potential resource trade-off between available and efficient services, which can explain the empirical ambivalence. The findings can contribute to an emerging discussion of the optimism that characterizes parts of the e-government literature (Bannister & Connolly, 2020; Bekkers & Homburg, 2007). The findings show that both empirical data and an alternative theoretical perspective can be used as methodological resources to question established assumptions in a field. The optimistic part of the e-government literature rests on the assumption that the technologies lead to an inevitable transformation that will make government better (Bekkers & Homburg, 2007). The street-level perspective rests on a different set of assumptions; the structure's ability to limit action stands in contrast to the

assumption that inevitable technological transformation will improve government. The empirical ambivalence seems to nuance both assumptions, thus providing support for the call for more contextualization in e-government research (see for example Lindgren et al., 2019).

## 6. Conclusion

This article has explored how frontline workers in NAV perceive electronic communication with clients in terms of its efficiency. The frontline workers experience direct communication as efficient, and find that the outsourcing of tasks in other channels can ease their workload. However, the requirement for more documentation of their work can be inefficient. The frontline workers also find that electronic communication makes them more available to clients. Using a street-level perspective, I argue that, when frontline workers seem to be more available through electronic communication, this can spur a demand for services. This is not a result of the technology itself but rather of how the electronic communication is perceived and used in this specific street-level context. The service is perceived as available both in practical terms (e.g., direct contact and technical access around the clock) and in the changed signals given in the digital interaction setting (e.g., less bureaucratic language and no visible waiting line). The potential resource trade-off between efficient and available services can therefore explain the ambivalence in the empirical data.

This article is an empirical contribution to the e-government literature about the provision of digital welfare services. First, it addresses the underexplored topic of electronic communication between frontline workers and clients. Second, I show the relevance of a street-level perspective on the provision of digital welfare services. My discussion of the supply-driven dynamics in street-level bureaucracies sheds light on a part of the framework that is often treated implicitly in the literature. It also contributes to a discussion of the optimism that characterizes part of the e-government literature (Bekkers & Homburg, 2007). Third, the empirical data and emphasis on the digital interaction setting respond to the call for contextualization of e-government research.

The findings in this article form the basis for new research. First, research on the resource trade-off between efficient and available services in electronic communication could improve our understanding of the potential benefits and challenges of digital service provision. While the findings in this article cannot be generalized, the street-level lens contributes to a structural argument, which makes them relevant to other street-level bureaucracies. A second research area concerns the individual conservation of resources, also referred to as the "cushioning" of resources (Lipsky, 2010). Whereas it was not the most prominent finding in the data, some empirical examples suggest that it can be hard to transfer saved time from one operative area in the organization to another. Third, and an important element of the two preceding research areas, the digital interaction setting calls for further empirical research, as the setting shapes the clients' expectations of services and also client compliance (Lipsky, 2010). The importance of further research manifests itself in the potential cost of wrongful assumptions – for the policymakers who are accountable, for the public that funds the digital investment, and for the clients who receive electronic services.

## Funding

This work was supported by the Centre for Work Inclusion at Oslo Metropolitan University; and The Research Council of Norway [grant number 256706 (INNOWEL project)].

The funding sources were not involved in the study design, the data collection and analysis, the writing of the article and the decision to submit it for publication.

## Declaration of Competing Interest

The authors declare that they have no known competing financial

interests or personal relationships that could have appeared to influence the work reported in this paper.

## Acknowledgements

I am grateful for feedback and guidance from Cathrine Egeland, Blanka Støren-Vaczy and Karen Nielsen Breidahl. I thank the anonymous reviewers for valuable comments.

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