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## Deservingness and street-level decision-making: Two survey experiments on the use of discretion in the public sector

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# Deservingness and street-level decision-making

Two survey experiments on the use of discretion in the public sector

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# Deservingness and street-level decision-making

Two survey experiments on the use of discretion in the public sector<sup>a</sup>

by

Martin Lundin and Josefin Häggblom<sup>b</sup>

August 26, 2022

## Abstract

When prioritising among clients, street-level bureaucrats may partly base their decisions on an assessment of the extent to which clients are deserving of help. We examine the impact of two “deservingness cues” on street-level decisions: the extent to which clients seem to need help and the extent to which clients appear to have responsibility for their neediness. The analysis is based on survey experiments with Swedish employment officers. We find that caseworkers devote more working time to jobseekers in greater need, but jobseekers in greater need have no increased likelihood of receiving a training program. In contrast, clients with greater responsibility for their neediness have a lower probability of receiving training, but caseworkers allocate just as much work time to these clients as they do to others. Thus, we confirm that client deservingness is important but qualify this conclusion along two dimensions. First, different cues of deservingness have different impacts for one and the same decision. Second, all types of decisions are not affected in the same way.

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## 1 Introduction

Teachers, social workers, employment officers and other street-level bureaucrats<sup>1</sup> interact with citizens in their daily work. Rules and regulations guide their activities, but there is usually considerable discretion. Thus, street-level bureaucrats can have a profound influence on policy provision (Lipsky 1980). Understanding their actions is important to understand how public administration operates in reality, and much research that tries to describe and explain the behaviour of street-level bureaucrats has emerged during the last forty years or so.<sup>2</sup>

When street-level bureaucrats use their discretion, client attributes may influence their decisions and actions. For example, it has been argued that the extent to which a bureaucrat believes that a client deserves attention or is worthy of help is a key feature in the process when clients are assessed (Goodsell 1981; Jilke and Tummers 2018; Lu, Xu and Wang 2021; Maynard-Moody and Muscheno 2003). Some clients are, for some reason, perceived to deserve more or better attention than others. They tend to get priority. In this paper, the goal is to deepen our understanding of how client deservingness affects discretionary decision-making. We do so by conducting two large survey experiments with Public Employment Service (PES) officers<sup>3</sup> in Sweden.

We contribute to the literature in at least three ways. First, most prior studies on street-level bureaucrats discuss client deservingness in general terms. However, Jilke and Tummers (2018) argue that it is important to learn more about the impact of the different reasons for being regarded as a more or less deserving client. We focus on two deservingness cues in this paper: *need* and *responsibility*. If clients are regarded as in greater need of help, perceived deservingness is expected to increase, and these clients are expected to receive priority over others (Goodsell 1981). Moreover, a client may have ended up in his or her situation for various reasons. Sometimes it is more obvious that the client is unlucky and that the blame should be placed somewhere else. Other times, there are reasons to believe that the situation to a greater extent is a consequence of the client's own behaviour. If the client's own responsibility increases, perceived deservingness is expected to decrease, and street-level bureaucrats are expected to give less priority to the client (Van Oorschot 2000).

Our second contribution is based on the fact that street-level bureaucrats are confronted with diverse tasks. The impact of client deservingness on street-level actions may differ depending on the situation. We take a closer look at two different scenarios in our experiments. The first focuses on how much working time employment officers devote to clients. The second concerns a

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<sup>1</sup> We use street-level bureaucrats, street-level workers and frontline workers interchangeably in the paper.

<sup>2</sup> For overviews, see Hupe, Hill and Buffat (2015) and Meyers and Vorsanger (2003).

<sup>3</sup> We use employment officers, PES officers and caseworkers interchangeably in the paper.

situation where the caseworker must decide whether an extraordinary and expensive labour market programme should be granted to a jobseeker. This means that different decision environments with different boundary conditions are investigated in the two experiments. We expect deservingness cues to have a greater impact when street-level bureaucrats have more room to manoeuvre. In comparison to a decision about labour market training, the caseworkers studied in our setting can more easily decide upon how to allocate their time by themselves, with little influence on other decisions and with fewer boundary constraints. Hence, deservingness cues have the potential to be more important when frontline workers allocate time than when they decide about whom to offer to participate in labour market training.

Third, it is important to underscore that prior research on the impact of client deservingness is mostly based on qualitative evidence. Experiments have become more popular in recent years in public administration research (Bouwman and Grimmelikhuijsen 2016), but it is still an underused methodology (Grimmelikhuijsen et al. 2017). Street-level bureaucracy is one subfield where scholars have noted that more experiments are needed (e.g., Tummers et al. 2015). Two recent studies examine the effects of client deservingness using survey experiments. Jilke and Tummers (2018) study U.S. teachers and find that some forms of client deservingness have an impact on decision-making. Lu, Xu and Wang (2021) focus on law enforcement officers, a kind of parapolice, in China. They confirm the idea that client deservingness is an important variable affecting street-level decision-making. We add to this growing literature with additional experimental evidence. Our focus on employment officers, a group of street-level workers not studied before with a focus on the impact of client deservingness, is a novel contribution.

In the empirical analysis, we confirm the established idea that deservingness cues make a difference for how street-level workers use their discretionary power. However, we qualify this statement by showing that different deservingness cues have different impacts for different tasks. We show that passive clients (higher need) are prioritised more than active clients (lower need) when Swedish employment officers allocate their working hours. However, the likelihood of receiving a slot in an expensive labour market training programme is not higher among jobseekers in greater need of help than others. These findings are in line with an interpretation that need deservingness matters more when the street-level worker meets fewer boundary constraints. On the other hand, we find no difference in how employment officers allocate their working hours depending on whether the client resigned from her last job on her own initiative (higher responsibility) or because her employer had to lay off a number of workers (lower responsibility), whereas an increased client responsibility decreases the chances of receiving labour market training. Contrary to expectations, responsibility deservingness is in this case not of greater importance when there are fewer boundary constraints. Instead, we find the opposite. In

conclusion, we argue that these findings might be a consequence of the employment officers' roles of both helping and monitoring clients.

The rest of this paper is organised as follows. In the next section, the relevant literature and theoretical background are summarised. Thereafter, our two survey experiments are described. In the fourth section, the results are reported. Finally, we summarise and discuss our findings in a concluding section.

## **2 Street-level bureaucrats and client deservingness**

Social workers, teachers, nurses and employment officers are examples of professionals carrying out public policy at the frontline of the public sector. In their daily interactions with citizens, they decide what services to provide. These frontline workers often experience diverse, conflicting and unclear demands from rules and regulations. They also have their own values and opinions to consider, and they must take into account professional codes, directives from managers, colleagues' opinions and demands from clients. Furthermore, they operate in a context that tends to be characterised by work overload and scarce resources. Accordingly, there are limits on the extent to which citizens can receive services, and it becomes necessary for street-level workers to prioritise. Prioritising during public service delivery implies giving more effort, time or resources to some clients than to others (Tummers et al. 2017). Managers usually do not directly oversee what happens in this process. This means that street-level bureaucrats have considerable discretionary power when conducting their work (Lipsky 1980; Brodtkin 1997; Scott 1997; Sandfort 2000; Maynard-Moody and Muscheno 2003; Hupe, Hill and Buffat 2015; Jilke and Tummers 2018).

Research shows that street-level bureaucrats and their selected job strategies affect client outcomes. Behncke et al. (2010), Cederlöf, Söderström and Vikström (2021) and Schiprowski (2020) convincingly demonstrate that employment officers have a clear effect on jobseekers' chances on the labour market. Rockoff (2004), Rivkin, Hanushek and Kain (2005), Aaronson, Barrow and Sander (2007) and Rothstein (2010) prove that teachers affect student performance. Granqvist, Hägglund and Jakobsson (2017) find that caseworkers working within public sickness insurance systems affect the pace at which people on sick leave return to work. This means that understanding how street-level bureaucrats use discretionary power is important.

Many different factors may affect how street-level bureaucrats conduct their work. For instance, one strand of the literature focuses on the characteristics of the bureaucrat herself, such as gender (Portillo and DeHart 2009; Portillo 2012) and experience (Assadi and Lundin 2018; Oberfield 2010). The role of managers, political and organisational control, and the importance of colleagues and professional norms are examples of other aspects covered in prior research (e.g.,



Brehm and Gates 1997; Hupe, Hill and Buffat 2015; Riccuci 2005; Meyers, Glaser and McDonald 1998; Meyers and Vorsanger 2003; Scott 1997).

The role of the client interacting with the street-level worker is yet another factor that has received much attention from scholars, a central theme being client deservingness (Lipsky 1980; Goodsell 1981; Maynard-Moody and Muscheno 2003; Jilke and Tummers 2018; Lu, Xu and Wang 2021). Deservingness can be defined as having a rightful claim, by virtue of actions or qualities, to be entitled to a specified treatment (Feather 2006). The theoretical idea starts with the assumption that street-level bureaucrats, similar to human beings in general, are guided by values when making their decisions. Human minds are confronted with a steady inflow and complexity of information that must be processed. Decisions are therefore to an important extent based on cognitive shortcuts (or “heuristics”) where a narrower subset of information becomes important. It is through such shortcuts that humans have learned to make sense of the world. For instance, a smile may indicate that somebody has a friendly attitude. People have learned this over the years and immediately jump to the conclusion that somebody who is smiling has positive intentions. The same holds true for cues of deservingness. Street-level bureaucrats have learned over the course of their tenure that clients who, for example, struggle in an area are those that need their help most. This is something frontline workers assess almost automatically, without much reflection. Petersen et al. (2010) argue that shortcuts of deservingness spontaneously guide people’s opinions and decisions, reflecting deep and automatic psychological processes. Studies in neuroscience also show that the human brain has systems for processing the intentions of others; when deciding about helping others, these systems become important (Petersen et al. 2010).

Van Oorschot (2000) proposes five dimensions of deservingness: (i) the level of need, (ii) the level of control or responsibility for the neediness, (iii) the identity, in the form of proximity to the “rich” or to “us”, (iv) the individual’s attitude or gratefulness, and (v) reciprocity, which is the extent to which the individual has earned support. Perceived deservingness is, according to Van Oorschot, expected to be greater if individuals have a high level of need, have little responsibility for their own plight, share the group identity of “us”, show gratitude, contribute to society and try hard to avoid the situation.

Several qualitative studies find that deservingness considerations affect the behaviour of street-level bureaucrats. Goodsell (1981) analysed welfare workers in an early study primarily based on interviews. The street-level bureaucrats examined in the study operated in a state of compression and high stress. Goodsell found that this resulted in selective favours for some clients. Older clients, disabled persons, abused children, refugees and larger families were regarded as in greater need and more deserving of help. Clients “trying their best” were

categorised in the same group by street-level workers. On the other hand, individuals regarded as exploiting the welfare system, “such as the young and healthy and those arriving at the department in expensive automobiles” and “drunks and threatening individuals” (p. 774), were viewed as less deserving. More deserving clients received extra-attentive behaviour on behalf of the welfare worker, according to Goodsell. The importance of deservingness has been demonstrated in other qualitative work as well. For example, findings in Hagen and Owens-Manley (2002) suggest that welfare workers see clients who demonstrate that they truly want to change their situation as more deserving. The results in Anagnostopoulos (2003) indicate that some teachers do not want to waste energy on pupils who do not care about their own studies, whereas Kelly (1994) suggests that teachers give special attention to poorly performing children because they see them as more deserving of help.

Experiments have been used in a few cases to advance our understanding of the impact of deservingness on street-level decision-making. Scott (1997) uses a laboratory experiment to examine how the level of welfare benefits granted by caseworkers is affected by various factors, one of them being compassion for the client. In made-up cases, Scott randomly varies the background stories of the clients to induce differential feelings of compassion for the client. In total, 96 graduate students and social work practitioners participated in the experiment. Scott finds that the level of welfare benefits provided to the client increases if the client is described as a high-compassion rather than a low-compassion case.

Studies carried out in a U.S. context dominate the literature; all the empirical studies cited above come from the U.S. Moreover, welfare workers or teachers are usually in focus. However, the importance of deservingness has been documented in other countries and within other occupations as well. For example, Lu, Xu and Wang (2021) study 422 law enforcement officers in China using a survey experiment. They operationalise deservingness in vignettes by describing a citizen, a street vendor, either as an old man (high deservingness) or as a young man (low deservingness). In line with their expectations, they find that law enforcement officers treat the old man in a more favourable way by giving him a lower fine for breaking the law.

None of the empirical studies cited above tries to distinguish between different forms of client deservingness. However, a third experimental study, Jilke and Tummers (2018), is a significant contribution in this regard. According to their typology, a client can be regarded as more deserving because she tries her best and works hard (earned deservingness) or because she truly needs help (needed deservingness). These dimensions correspond to Van Oorschot’s (2000) dimensions of reciprocity and need presented above. Jilke and Tummers also suggest a third category of deservingness (resource deservingness): clients are more deserving when they have “a high chance to succeed in terms of bureaucratic success criteria and investing in them is a good use of

scarce resources” (p. 229). It can be questioned whether resource deservingness truly is about deservingness considerations; it appears to be more related to efficiency. That is, street-level bureaucrats give more priority to some clients not because they think that these clients deserve more help than others but rather because they think that investing in them will make a difference.<sup>4</sup> Nevertheless, Jilke and Tummers conduct an interesting survey experiment with 344 U.S. teachers and find strong support for the impact of needed deservingness, some support for earned deservingness, but no support for resource deservingness.

The literature overview presented above leads us to draw at least three important conclusions on how we can advance the research. First, most papers about client deservingness are qualitative and conducted in the U.S. The interesting studies by Scott (1997), Lu, Xu and Wang (2021), and Jilke and Tummers (2018) inspire us to conduct additional survey experiments to discern the causal effects of client deservingness on street-level decision-making; experiments from various countries and various policy sectors are still needed.

Second, specifying and examining the impact of various deservingness cues seems to be a promising way forward. We need to pinpoint the mechanisms that trigger perceptions of deservingness among street-level bureaucrats. In our empirical analysis presented below, we investigate deservingness cues related to *need*, which is one of the fundamental deservingness dimensions suggested both by Van Oorschot (2000) and Jilke and Tummers (2018). Need is simply the extent to which the client is in trouble and in need of help from the authorities to overcome her situation. Increasing need is expected to increase perceived deservingness and thus also the extent to which the client receives priority by the street-level worker. We will also study the impact of client *responsibility*, which is the client’s control over her neediness (Van Oorschot 2000). When the problems facing the client are beyond her immediate control, she cannot be held responsible. She is therefore perceived as more deserving, and we expect that frontline workers will give her more priority.

Third, attempts to investigate whether various types of street-level decisions are affected in similar or dissimilar ways by client deservingness appear to be missing in the literature. Street-level workers usually have diverse tasks to handle, but in prior research on the impact of deservingness cues, all types of street-level activities are lumped together. Determining whether this is reasonable is a relevant research task. Our ambition is not to put forward an elaborated theory on these matters. Instead, we suggest the rather basic idea that the street-level workers’ room to manoeuvre might be important. Different street-level decisions are surrounded by different boundary conditions created by institutions, such as laws and regulations. We expect the

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<sup>4</sup> Note also that Jilke and Tummers (2018) argue that “the concept of resource deservingness is closely related to the notion of client cream skimming” (p. 229).

potential for deservingness cues to impact decisions to be greater when the constraints on street-level conduct are fewer. To investigate this proposition, we designed two survey experiments in which the constraints are greater in one of them.

### **3 Two survey experiments**

We conducted two survey experiments with employment officers in Sweden to examine the impact of client deservingness on discretionary decision-making. Unemployment is one of the largest challenges to modern welfare states. Active labour market policies are used to support unemployed jobseekers and to match them with vacancies. In Sweden, the Public Employment Service (*Arbetsförmedlingen*) is the authority responsible for carrying out national labour market policy. Caseworkers at local offices provide jobseekers with information and counselling. They decide whether someone is eligible for unemployment insurance benefits and what active labour market programmes, such as training or subsidised employment, to offer the unemployed. Employment officers interact with citizens in their daily work, and they are typical street-level bureaucrats. PES officers in various countries have been examined in prior research on street-level bureaucrats (e.g., Assadi and Lundin 2018; Osiander and Steiner 2015) but not as much as, for example, social workers and teachers. To the best of our knowledge, the impact of client deservingness on PES officers' use of discretionary power has not been studied before.

As part of a larger research project, we sent web surveys to all PES officers at 48 local offices in the spring of 2018 and 2019. The selection of offices was not random, but the offices were well dispersed over various types of labour markets (e.g., urban and rural areas) in the middle and southern parts of Sweden. We had no access to background data on the entire population of employment officers in Sweden in 2018 and 2019. However, some information about the entire population (in March 2019) is easily available in a report from the Swedish National Audit Office (2020). Table A1 in the Appendix demonstrates that the background characteristics of the caseworkers participating in our web surveys are very similar to those of employment officers in Sweden in general.

The caseworkers responded to several survey questions. An experiment was embedded in each survey. In both experiments, the respondents were presented with a made-up scenario (see Boxes 1 and 2). Our intention was to vary the level of client need (low/high) and client responsibility (low/high). As a result, there are four versions of the scenario in each experiment (a 2×2 design). We instructed the caseworkers to make an independent decision and not to discuss the case with their colleagues. Note that providing different versions of the experiment scenario to different caseworkers within the same office could have generated problems. For example, if the caseworkers recognised that they received different scenarios, the experiment would have been

revealed. Therefore, estimates could have been biased due to the potential spillover of intervention effects. In addition to damaging the experiment, this also could have affected the response rates and the answers to other questions included in the web survey. Hence, we decided that all caseworkers at a specific office should receive the same version of the case (a so-called cluster design). That is, the 48 offices were randomly assigned to the four scenarios, with 12 offices in each group.

Given the design of the survey, we clustered the standard errors at the office level in our empirical analyses. However, if the clusters are too few and the units per cluster are not the same throughout all clusters, hypothesis tests might sometimes be incorrect even though the standard errors are clustered (Heß 2017; MacKinnon and Webb 2019). The so-called “randomisation inference” could in such cases produce more reliable results (Heß 2017). As a robustness check, we therefore calculated standard errors using the randomisation inference; see Table A6 in the Appendix. All conclusions remain the same if this procedure is employed.<sup>5</sup>

In the experiment on the *allocation of work time*, described in Box 1, we wanted to examine how client deservingness affects how caseworkers devote time to clients.<sup>6</sup> Allocation of work time includes both actual meetings with the jobseeker and other time spent on the case, such as preparation, follow-up, and administration. In vignettes, we provided information about two female unemployed jobseekers, Anna and Boel. We tried to make the scenario as realistic as possible (and hold a couple of variables constant). Anna was included as a common reference point for all responders; the characteristics of Anna were the same in all four versions of the case. By including Anna, we forced the caseworkers to prioritise.<sup>7</sup> It also helped us to “hide” the experiment, making it harder for the respondents to adjust their responses to provide a desirable answer. What we are interested in is how much time the caseworker gives to Boel, depending on how we describe her in terms of deservingness. The outcome scale is 0–10, and a higher score implies that Boel receives more attention. A score of 5 means that Anna and Boel receive the same attention.

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<sup>5</sup> Another potential problem with cluster designs brought up in the literature in recent years is that estimates at times may be somewhat biased when the cluster sizes differ (Middleton and Aronow 2015). A solution to circumvent this problem is to use so-called “block randomisation”; see Jilke et al. (2019) for an empirical example. Unfortunately, we were not aware of this when we designed our surveys. However, although we cannot be completely certain, we do not think that this constitutes a major problem in this case. The results that we find are clear and robust, and the possible bias generated by diverse cluster sizes is unlikely to have such a large impact that conclusions are altered.

<sup>6</sup> Employment officers in Sweden have no detailed instruction on how cases should be prioritised. On a general level, the authority is instructed to give more support to long-term unemployed jobseekers and to individuals in great risk of becoming long-term unemployed; see Ordinance (2007:293), with instructions for the Swedish Public Employment Service.

<sup>7</sup> We believe that this common reference point implies that the case better reflects a real-life situation than a scenario where the employment officers assess only how much time they devote to one client. By including “Anna”, there is an obvious alternative cost of allocating time to “Boel”.

### Box 1 Allocation of work time—survey experiment with employment officers

Finally, we have a question on how you would allocate working time between two fictitious jobseekers if you met them in your work. In a real situation, there are many factors that can affect your assessment, but how would you allocate your time based on the information available here? There is no right or wrong answer. For the credibility of the survey, it is very important that you answer the question without discussing it with your colleagues.

#### Jobseeker A. Anna

Anna is 38 years old. She has completed a 3-year upper secondary education in commerce and administration. As a person, Anna is not clearly distinguished in any special way. During the last five years, she has had some temporary jobs, but at times she has also been unemployed or participated in on-the-job training. Her most recent employment was a shorter temporary job that expired. She has now been unemployed for 5 months and is looking for a full-time job.

#### Jobseeker B. Boel

Boel is 46 years old and has a 2-year upper secondary education. She is outgoing, confident and quite active [1]. During the last five years, she has had two shorter periods of unemployment. But now she has been openly unemployed for 5 months and is looking for a full-time job. Her last job was a part-time office job. Boel did not like her job and resigned at her own initiative [2].

#### How would you allocate working time between Anna (Jobseeker A) and Boel (Jobseeker B)?

Much more time on Anna				Just as much time on Anna and Boel				Much more time on Boel			
0	1	2	3	4	5	6	7	8	9	10	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Need [1] and responsibility [2] are varied by altering the underscored text in the scenario (*not* underscored in the web survey) in the following way:

Low need = “She is outgoing, confident and quite active”

High need = “She is quiet, insecure and quite passive”

Low responsibility = “The company was forced to reduce its business and Boel had to leave her job”

High responsibility = “Boel did not like her job and resigned at her own initiative”

We capture client need by portraying Boel as either “outgoing, confident and quite active” (low need) or “quiet, insecure and quite passive” (high need). Varying these attributes of Boel is expected to generate varying cues of need deservingness. When Boel is described as a quiet, insecure and quite passive person, we expect caseworkers to perceive her as in greater need and, accordingly, give her more priority.

Client responsibility is assessed by describing the reason for being unemployed in two different ways. In the low responsibility version, Boel was forced to quit because the company she worked for had to cut down on business. In the high responsibility case, she quit on her own initiative simply because she did not like her job. We expect the low responsibility version of Boel to be regarded as more deserving and that she therefore receives more attention on behalf of the caseworker.

The second experiment concerns a *decision about labour market training*. Should the jobseeker described in the vignette be granted a vocational training programme (*arbetsmarknadsutbildning*) she shows interest in? The experiment is described in Box 2.

## Box 2 Decision about labour market training—survey experiment with employment officers

Finally, we have a question on how you would handle a case that you could face in your work. Of course, in a real situation, there are many different factors that can affect your judgement, but what decision would you make based on the information available here? There is no right or wrong answer. For the credibility of the study, it is very important that you answer the question without discussing it with your colleagues.

You are responsible for a job-seeking woman aged 45, with two-year upper secondary education, and with experience from simple office work. She is outgoing, confident and quite active [1]. She has previously had some shorter periods of unemployment but has now been searching for jobs for just over 5 months. She did not like the job duties at her most recent workplace and therefore she resigned at her own initiative [2].

The jobseeker shows some interest in a vocational labour market training programme. It is a programme you know is quite expensive and there is a limited number of openings at the course. There are several examples of jobseekers who have been offered a job after this course but also several cases where the education has not led to a job.

**Do you direct the jobseeker to the labour market training programme?**

- Yes, definitely
- Yes, probably
- No, probably not
- No, definitely not

Need [1] and responsibility [2] are varied by altering the underscored text in the scenario (*not* underscored in the web survey) in the following way:

Low need = “She is outgoing, confident and quite active”

High need = “She is quiet, insecure and quite passive”

Low responsibility = “She worked at her last workplace for three years and she liked her job. However, the company went bankrupt and since then she has had a hard time finding a job”

High responsibility = “She did not like the job duties at her most recent workplace and therefore she resigned at her own initiative”

Labour market training is expensive in comparison to most other labour market policies. In that sense, it is an extraordinary measure, and the number of participants is lower than in other labour market programmes. Participating in training also means that time that could be used on other activities, such as searching for jobs, decreases. Caseworkers are instructed to consider two perspectives when deciding about training. First, vocational training should be used when the caseworker has reasons to believe that the jobseeker’s chances of getting a job after completing the programme are good. Second, jobseekers far from the labour market should receive priority, although it is also underscored in the caseworker instructions that it is sometimes justified to designate jobseekers who are closer to the labour market to vocational training (see, e.g., PES 2018). Relative to the experiment on the allocation of work time, the decision about labour market training implies many more constraints on what the caseworker can do. Accordingly, we expect deservingness cues to be of somewhat less importance in this context.

Need is captured in the experiment described in Box 2 in the same way as in the experiment described in Box 1. That is, the jobseeker is either portrayed as “quiet, insecure and quite passive” (high need) or as “outgoing, confident and quite active” (low need).

Responsibility is also assessed in a similar way as in the previous experiment. In the high responsibility version of the vignette, the jobseeker did not like her job and left it at her own initiative. In the low responsibility version, the company she worked for went bankrupt, and she lost her job. However, in this version, we unfortunately also added some more information. We noted that the jobseeker, after being laid off, had a hard time finding a job. A problem here is that the description of the case thus includes an element of client need; to some extent, it reinforces the fact that the jobseeker has been unemployed for five months, which is noted in all versions of the vignettes. This means that it becomes somewhat harder to distinguish the two forms of client deservingness from each other in this case.<sup>8</sup> However, this is probably not a major setback, since the length of unemployment (five months) is provided in all four versions of the case. Thus, we believe that responsibility is still the main component here, although some caution is needed when the results are interpreted.

The initial sample of PES officers in the experiment on allocation of work time (Box 1) was 3,856. In the experiment on the decision about labour market training (Box 2), it was 4,338. The response rates were approximately 50 percent in both experiments; the samples used in the analyses consisted of 1,965 (Box 1) and 2,262 (Box 2) individuals (see Table A2 in the Appendix). An analysis of background characteristics presented in Table A3 in the Appendix shows that the respondents are very similar to the original samples. The distribution across the four treatment groups is also more or less the same in the original samples and in the used samples. We are therefore not worried about biases due to nonresponses.

Prestudy power calculations to estimate minimum detectable effects (MDE) were difficult to perform in advance, since several important parameters were unknown. This included reasonable approximations of intraclass correlations (ICC) but also estimates of response rates and how the answers to the survey questions measuring the outcomes were to be distributed. However, power calculations after study completion showed an MDE of 0.52 in the experiment on allocation of work time and an MDE of 0.11 in the experiment on the decision about labour market training at 80 percent power (and 5 percent significance level). These figures suggest that we are powered to detect substantially interesting effects of at least medium and large size in our experiments.<sup>9</sup>

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<sup>8</sup> Note that prior research on the impact of client deservingness on street-level behaviour also suffers from measurement problems. For example, Lu, Xu and Wang (2021) operationalise deservingness by varying the age of the individual portrayed in the vignette. The risk of using general attributes such as age, gender and race is that it becomes harder to link the concrete measurements to the theoretical concepts.

<sup>9</sup> The observed ICC was 0.16 in the experiment on allocation of work time and 0.07 in the experiment on the decision about labour market training.



The experimental design implies that it is not strictly necessary to incorporate control variables in the analysis, but doing so can improve efficiency and make the estimates more precise.<sup>10</sup> Thus, we perform analyses both with and without control variables. The control variables that we use with descriptive statistics in each treatment group are presented in Appendix Tables A4 and A5. Due to internal missing values, the sample sizes decrease slightly when controls are added to the model specification. Reassuringly, the results are similar if control variables are included or excluded.

Some final caveats should be mentioned before turning to the results. First, survey experiments are suitable in order to establish causal effects (e.g., Hainmueller, Hopkins and Yamamoto 2014; Bouwman and Grimmelihijsen 2016; Jilke and Tummers 2018), but it is always hard to know to what extent the findings can be translated and generalised to real-life behaviour. Second, we believe that our operationalisations of need deservingness and responsibility deservingness are reliable. However, it is not possible to be completely certain that something else is not also captured in the measurements that we use. For instance, we noted above that the operationalisation of responsibility in the experiment on the decision about labour market training might include some elements of need. Third, we focus our attention on rather subtle cues of deservingness. We could have captured need and responsibility in other ways. For example, a lack of education may also imply greater need. We cannot be entirely sure that the results would be the same if other measures were used. Fourth, an important reason to study the allocation of work time and the decision about labour market training is that these tasks are different; more precisely, institutions create more constraints on what the caseworker can do in the second case. Admittedly, there are other differences between the experiments as well. In that sense, this study is not a strict test of the importance of boundary conditions. To examine that question with more precision, it is necessary to have experimental variation of boundary conditions, which we do not have.

## 4 Results

The results from the two experiments are presented below. We report the main results in two subsections, one for each experiment. Then, we also conduct some explorative analyses where we examine the impact in various subgroups of caseworkers.

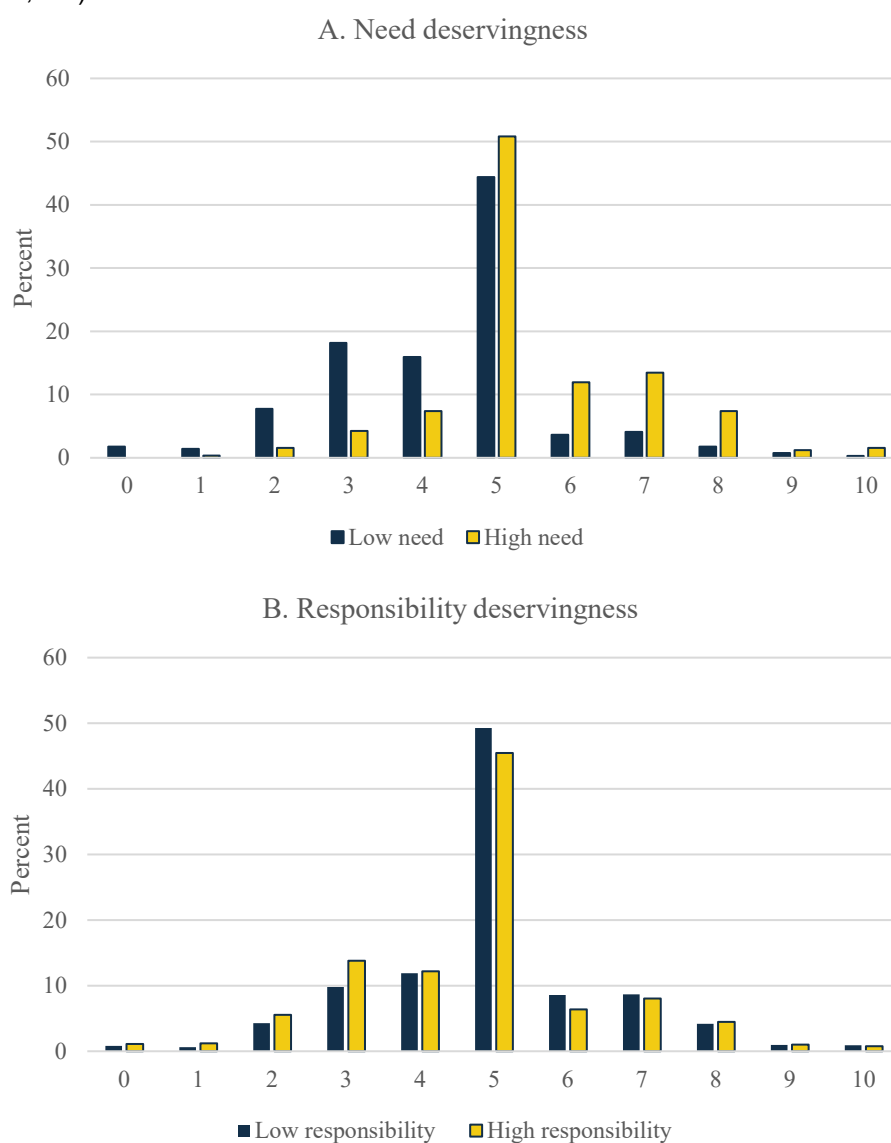
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<sup>10</sup> The cluster sample approach that we use makes our sample slightly unbalanced on some background characteristics (see Tables A4 and A5 in the Appendix). Most notably, local PES offices in Sweden are organised in labour market districts. The 48 offices included in our surveys are distributed over eight districts. Allocating PES offices in four treatment groups makes it impossible to receive similar shares of respondents in each treatment group from all eight labour market districts. Including control variables can mitigate potential worries due to imbalances in regard to background characteristics.

## 4.1 Allocation of work time

Figure 1 displays the results from the experiment on how PES officers allocate their working time. As expected, Panel A shows that client need has a sizeable impact in this scenario: the answers are clearly distributed towards higher values when need deservingness is high. The average score of the outcome variable, on the 0–10 scale, is 4.3 when Boel is described as outgoing, confident and quite active (low need) and 5.5 when she is described as quiet, insecure and quite passive (high need). This equals a large increase of 1.2 points or 27 percent.

**Figure 1** The extent to which a client receives priority by PES officers depending on how the client is described in terms of (A) need and (B) responsibility in the survey experiment (n=1,965)



*Note:* Responses to the survey question “How would you allocate time between Anna (Client A) and Boel (Client B)?” 0=“Much more time on Anna”, 5=“Just as much time on Anna and Boel” and 10=“Much more time on Boel”. Random allocation of treatment.

Turning to Panel B of Figure 1, we find no indication that client responsibility has a large effect on how employment officers prioritise among clients. The answers are distributed in a rather similar way regardless of whether the client had been laid off because the company had cut down on the number of employees (low responsibility) or whether the client quit because she did not like her work (high responsibility). However, the answers are slightly more distributed towards higher values in the first case, indicating a tiny effect in line with expectations: the mean value is 4.8 in the high responsibility case and 5.0 in the low responsibility case, which implies a modest difference of 0.2 points (4 percent) on the 0–10 scale.

**Table 1** Allocation of work time: the effects of client need and client responsibility on the extent to which PES officers give priority to clients

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Need	1.196*** (0.059)	1.210*** (0.056)	1.198*** (0.057)	1.246*** (0.073)	0.251*** (0.0127)
Responsibility	-0.120** (0.059)	-0.092 (0.055)	-0.080 (0.061)	-0.030 (0.090)	-0.017 (0.012)
Need × Responsibility				-0.095 (0.107)	
Model	OLS (0-10)	OLS (0-10)	OLS (0-10)	OLS (0-10)	Logit (0/1)
Control variables	No	District dummies	All	All	All
Adj./Pseudo R <sup>2</sup>	0.141	0.143	0.138	0.138	0.104
Mean, outcome	4.86	4.86	4.86	4.86	0.22
Observations	1,965	1,957	1,896	1,896	1,896

*Notes:* OLS estimates in Columns 1–4. Column 5 reports marginal effects based on a logit model (other variables are held at mean values). Robust standard errors are in parentheses, clustered on PES office. The outcome variable in Columns 1–4 is the answer to the survey question: “How would you allocate time between Anna (Client A) and Boel (Client B)?” (0–10, where 0=“Much more time on Anna”, 5=“Just as much time on Anna and Boel” and 10=“Much more time on Boel”). The outcome variable in Column 5 is a dichotomy coded as 1 if the answer is > 5; otherwise, it is coded as 0. Need and responsibility are randomly varied in the survey experiment. Control variables include years of education, university degree (1=yes, 0=no), type of education (11 categories), sex, age, age<sup>2</sup>, experience as a PES officer (years), working full-time (1=yes, 0=no), number of clients (in 7 categories), labour market district (8 districts) and number of caseworkers at the PES office. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

We have also examined the effects using regression analysis (OLS and logit).<sup>11</sup> The results from five specifications are displayed in Table 1. Model (1) includes no control variables and corresponds to the graphical analysis presented in Figure 1 above. The analysis confirms a large, positive and statistically significant impact of 1.2 (on the 0–10 scale) for client need: quiet, insecure and passive clients receive, on average, more attention from caseworkers. In line with theoretical expectations, the analysis in Model (1) also suggests a small, negative and statistically significant effect for increased client responsibility: a decrease of 0.1. In Model (2), we added control variables for the labour market district to the specification. This is reasonable, given that we have some imbalances between treatment groups related to the labour market districts (see Table A4). The impact of need deservingness is robust, while the small effect of responsibility

<sup>11</sup> As a robustness check, we have calculated the standard errors using randomisation inference. Table A6 in the Appendix shows p values from these calculations. Conclusions are not altered.

deservingness decreases further and becomes statistically insignificant in this specification. In Model (3), the full set of control variables was added to the analysis, and the findings remain the same.

The 2×2 experimental design implies that it is possible to examine interaction effects; that is, we can study whether the effects of client need differ depending on how the client is described in terms of responsibility for her neediness (and vice versa). Thus, in Model (4), we included an interaction term of the treatment variables; however, there is no indication of an important interaction effect in the analysis.

Last, in Model (5), the outcome variable was transformed to a dichotomy, taking on a value of 1 if Boel receives more priority than Anna (otherwise, it is 0). Thus, we use a logit model instead of OLS regression. The analysis shows that the probability that Boel receives more priority than Anna increases by 0.25 if Boel is described as quiet, insecure and passive. No impact of client responsibility is indicated in the logit analysis.<sup>12</sup>

Overall, we conclude that client need has a large impact on how PES officers allocate time among clients. We find a negative estimate of client responsibility in one of the specifications. However, given that the estimate is small and not statistically significant once we include control variables, it is reasonable to conclude that client responsibility is not very important for the way caseworkers distribute their work time.

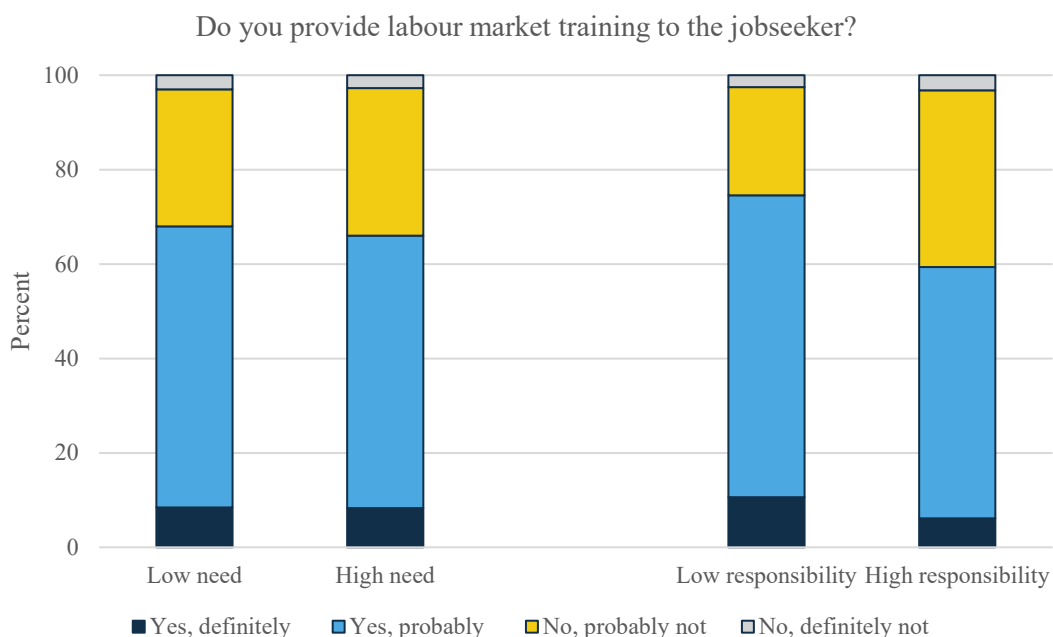
## **4.2 Decision about labour market training**

Figure 2 shows the results from the experiment concerning labour market training. Interestingly, the findings are not the same as in the first experiment: there is no difference in the likelihood that caseworkers grant training to jobseekers depending on how the client is described in terms of need. On the other hand, the reason for being unemployed seems to matter. In the scenario where the client has a comparably large responsibility for being unemployed, approximately 60 percent of the PES officers answer that they would “definitely” or “probably” provide the training programme. This figure increases to approximately 75 percent when the client’s responsibility for her unemployment situation is described as comparably low.

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<sup>12</sup> The estimates in the logit model do not change if control variables are excluded from the model specification.

**Figure 2** Decision about labour market training: PES officers' decision depending on how the client is described in terms of need and responsibility in the survey experiment (n=2,262)



In Table 2, we present the results from four logit models. The outcome is coded as binary, where 1 = “Yes, definitely” and “Yes, probably”, whereas 0 = “No, probably not” and “No, definitely not”. All four analyses clearly show that if the client quit her job at her own initiative, the probability of a positive response from the caseworker decreases substantially. Thus, and as already demonstrated in Figure 2, increased responsibility decreases the chances of receiving training. Contrary to expectations, the estimated impact of need deservingness is negative. However, the estimates are close to zero and statistically significant (at the 90 percent confidence level) in only one of the specifications (Model 2). In addition, if we calculate the standard errors using randomisation inference, the estimates of need deservingness are statistically insignificant in all specifications (see Table A6). We therefore conclude that client need has no important impact in this context. Last, note that we find no clear indication of an interaction effect of need and responsibility (see Model 4).

**Table 2** Decision about labour market training: the probability that PES officers provide labour market training to a client depending on client need and client responsibility (marginal effects)

	Model (1)	Model (2)	Model (3)	Model (4)
Need	-0.010 (0.036)	-0.046* (0.025)	-0.038 (0.025)	-0.004 (0.040)
Responsibility	-0.151*** (0.036)	-0.168** (0.021)	-0.158*** (0.021)	-0.122*** (0.038)
Need × Responsibility				-0.072 (0.057)
Control variables	No	District dummies	All	All
Pseudo R <sup>2</sup>	0.021	0.048	0.064	0.064
Mean, outcome	0.670	0.670	0.670	0.670
Observations	2,262	2,262	2,183	2,183

*Notes:* The table reports marginal effects based on logit analysis (standard errors clustered on PES office reported in parentheses). The outcome variable is the answer to the following survey question: “Do you provide labour market training to the job seeker?” (1=“Yes, definitely” or “Yes, probably”; 0=“No, probably not” or “No, definitely not”). Need and responsibility are randomly varied in the survey experiment. Control variables included years of education, university degree (1=yes, 0=no), type of education (11 categories), sex, age, age<sup>2</sup>, experience as a PES officer (years), working full-time (1=yes, 0=no), number of clients (in 7 categories), labour market district (8 districts) and number of caseworkers at the PES office. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

### 4.3 Additional exploratory analysis: heterogeneity

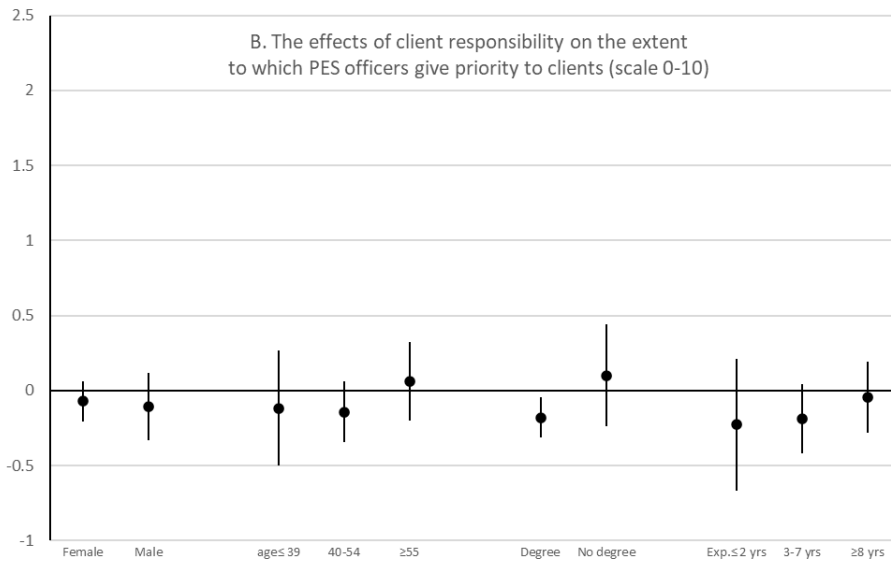
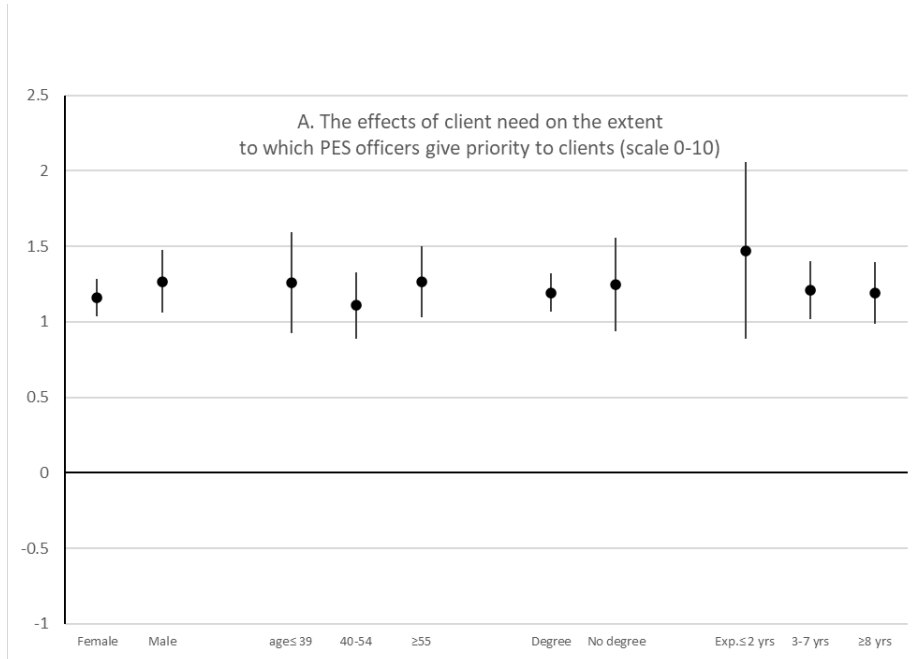
In this section, we report the results from analyses where we examine the heterogeneity of our main findings. We begin by studying whether the impacts of deservingness are contingent on the personal characteristics of the employment officer. Thereafter, we examine some mechanisms that may explain why PES officers devote more time to needy clients.

#### 4.3.1 Do the effects vary depending on caseworker characteristics?

Below, we study whether various subgroups of caseworkers respond in a similar way to deservingness cues. The following subpopulations are analysed: males vs. females, age in three groups, university degree vs. no university degree, and tenure as a PES officer (3 different levels).<sup>13</sup> We have no clear theoretical expectation about heterogenous effects, and the analysis should therefore be regarded as exploratory. Nevertheless, Jilke and Tummers (2018) indicate that the impact of client deservingness differs depending on the background characteristics of the teachers they examine. Similarly, studying rule-following among Swedish PES officers, Assadi and Lundin (2018) find some heterogeneity related to background characteristics. Thus, we are motivated to check the heterogeneity in our setting.

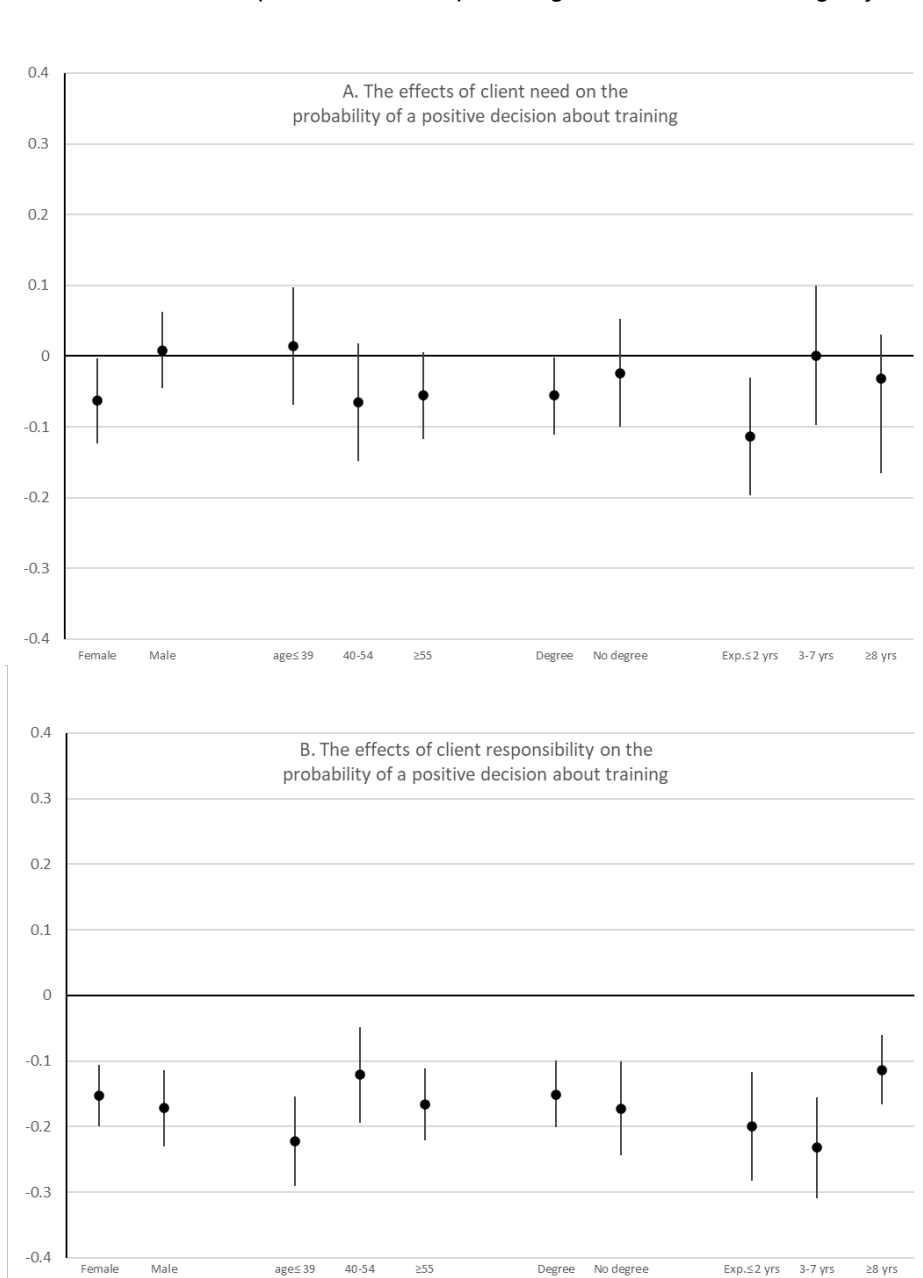
<sup>13</sup> The choices of how to construct age and experience groups are arbitrary. In terms of experience, however, we wanted a group of quite inexperienced caseworkers. Therefore, a two-year experience cutoff is used. For the rest of the caseworkers, we used a median split. We have tested different definitions of the groups and the findings are robust.

**Figure 3** Subgroup analyses: The impact of client need and client responsibility on how PES officers allocate time to clients



Notes: Point estimates with 95% confidence intervals. See Model (3) in Table 1 for details. Exp. = Experience in years. Degree/No degree = PES officers with/without a university degree.

**Figure 4** Subgroup analyses: The impact of client need and client responsibility on the probability that PES officers are positive towards providing labour market training to jobseekers



*Notes:* Point estimates with 95% confidence intervals. See Model (3) in Table 2 for details. Exp. = Experience in years. Degree/No degree = PES officers with/without a university degree.



Panel A in Figure 3 shows that increased client need significantly increases the extent to which PES officers allocate time to clients in all subgroups; the estimate ranges from 1.1 to 1.5. There is some indication that inexperienced caseworkers are more easily influenced by need deservingness, but as illustrated by the large confidence interval, the estimate is rather imprecise. Panel B in Figure 3 shows that the effect of client responsibility on allocation of time is close to zero in all subgroups. The estimates are negative and marginally larger in the group of PES officers with little experience and among those with a university degree. In the latter case, the estimate is also statistically significant. However, the effects are still rather small.

Turning to Panel B of Figure 4, we find that increased client responsibility significantly decreases the probability of receiving labour market training in all subgroups; the estimate ranges from 0.11 to 0.23. Once again, there is a slight tendency for the effect to decrease with increased tenure. Last, Panel A of Figure 4 shows that client need has no effect on decisions about training in most groups of PES officers. In this case, we find negative and statistically significant effects of need deservingness among female PES officers and among caseworkers with a university degree or having little experience. Note that the direction of the impact is contrary to expectations; that is, the chance of receiving training decreases if jobseekers are in greater need of help.

In summary, the general impression is that the results are quite similar across subpopulations. In line with the main results presented above, all subgroups of PES officers use deservingness cues to decide what jobseeker to prioritise. The magnitudes of the effects differ to some extent depending on caseworker characteristics, but the pattern is not completely clear. The most apparent hypothesis generated from the heterogeneity analyses is that the effects of client deservingness might decrease with caseworker tenure. This is something that needs further theoretical development and empirical exploration in future studies.

#### **4.3.2 Why do needy clients receive more priority from caseworkers?**

One very clear result in the main empirical analysis is that caseworkers devote more time to needy clients. Our theoretical assumption is based on the idea that street-level bureaucrats find these clients more deserving of help and therefore put in some extra effort. However, we cannot be completely sure that deservingness considerations explain why employment officers allocate more time to quiet, insecure and passive clients. Two other potential mechanisms are discussed in this section.

First, PES officers may prioritise needy clients because they think it is more effective to focus their attention on this group; they may believe that the possibility of making a difference is larger in these cases. Strictly speaking, if an employment officer gives extra help to a quiet, insecure and passive jobseeker, it is hard to know whether the client's deservingness, a calculation of the possibilities of making a difference or both aspects are considered by the caseworker. In many

cases, we believe that these considerations are intertwined, and the caseworker may reason along the lines of “the client is in need and thus I can make a difference”. Second, the PES in Sweden is instructed to be extra attentive to clients risking long-term unemployment.<sup>14</sup> In the case when the client is described as quiet, insecure and passive, employment officers may interpret this as an increased risk of long-term unemployment. It is therefore possible that the identified impact of need is explained by a willingness “to do as you should” according to the overall instructions rather than by deservingness considerations.

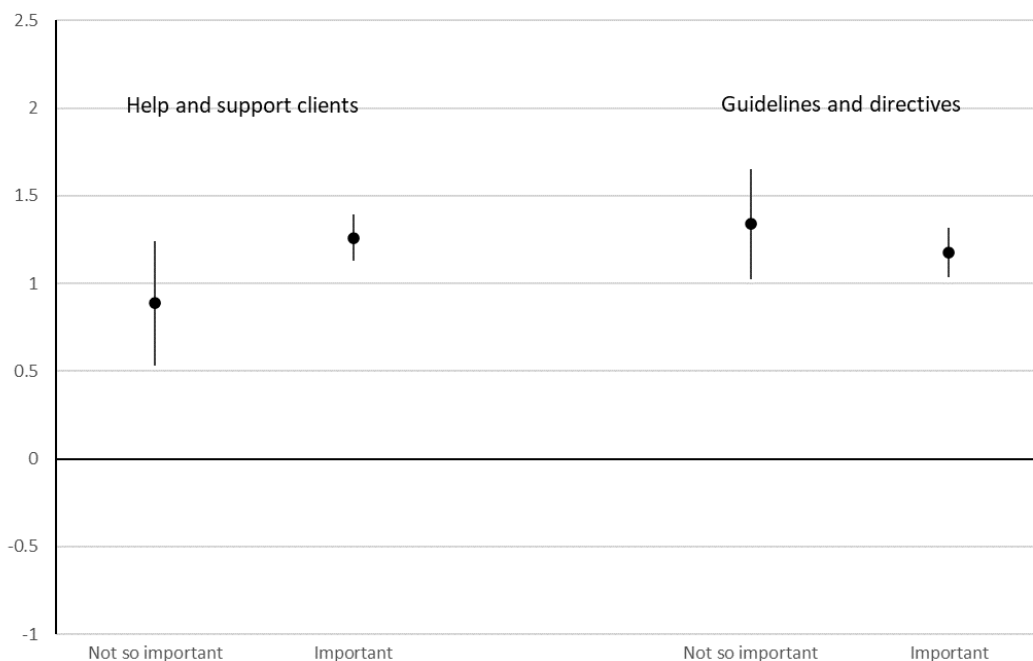
We have no possibilities to decisively distinguish between various mechanisms. However, the web questionnaire included some attitude questions that may to some extent be used to explore this issue. First, we have data on whether employment officers regard helping and supporting jobseekers as the most important part of their job. If the impact of need deservingness is driven by PES officers giving high priority to this task, it can be regarded as an indication that deservingness considerations are important. If the impact instead is greater among other employment officers, it is more likely that something else is driving the results. The analysis presented to the left in Figure 5 shows that the estimate is higher in the group of caseworkers who put more emphasis on help and support. These findings are in line with an interpretation in terms of deservingness.

We also have data from the web questionnaire on the extent to which the employment officer puts emphasis on directives and guidelines from higher levels within the authority. If the effect of need on allocation of time is mainly driven by caseworkers who try hard to follow such instructions, there is a larger probability that the impact is explained by a willingness to follow the general goal of the authority rather than by deservingness cues. However, this is not the case, according to the estimates from the analysis presented in the right part of Figure 5. If anything, the impact is stronger among caseworkers who do not think that directives are so important. Taken together, the results presented in Figure 5 suggest that deservingness considerations are important when street-level bureaucrats decide how to allocate time among jobseekers.

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<sup>14</sup> See, for example, Ordinance 2007:293.

**Figure 5** Subgroup analyses: The impact of client need on how time is allocated to clients depending on caseworker attitudes



*Notes:* Point estimates with 95% confidence intervals. See Model (3) in Table 1 for details. Survey question (included pretreatment in order not to disturb randomisation): “To what extent do you agree with the following statements?” Items: (i) “To help and support clients is the most important part of my work” and (ii) “I always try to closely follow guidelines and directives from superior levels within the PES”. Scale: 1–7, where 1=“Does not agree at all” and 7=“Completely agree”. Answers 1–4 are coded as “not so important” and 5–7 as “important”.

## 5 Conclusion

In this paper, we have studied the impact of client deservingness on the use of discretion by street-level workers within the Swedish Public Employment Service. The main contribution to the literature on street-level bureaucracy from the study is the message that various dimensions of client deservingness and various types of street-level tasks should be studied separately when researchers try to pin down how the clients themselves affect what happens at the frontline of the public sector. This conclusion is supported by the empirical results from an analysis of the impact of two deservingness cues—client need and client responsibility—in two different decision environments.

We have found evidence supporting the idea that client deservingness cues sometimes affect street-level bureaucrats in their daily work. The analysis of one of our two survey experiments shows that employment officers allocate more time to clients who are perceived to be in greater need of their help. Thus, we confirm the findings of Jilke and Tummers (2018) concerning U.S. teachers. Although this finding was rather expected and probably also in line with the intentions of policy-makers, other results were feasible. For instance, active clients in less need of help could be easier to work with, which could have generated a priority for these individuals over the more

passive ones. Given a shortage of available time and information, a strategy of allocating the same time to all clients without paying attention to the deservingness cues included in the experiment was another possible outcome. This was, however, not the case. Another finding in line with theoretical expectations, derived from our second survey experiment, is that employment officers are less willing to grant labour market training to jobseekers who have a greater responsibility for being unemployed. The impact of client responsibility on street-level behaviour has, to the best of our knowledge, not been studied in survey experiments before. The significant effects of client need on the allocation of time and client responsibility on decisions about training apply to all subgroups of caseworkers we have studied: men and women, more and less educated caseworkers, older and younger caseworkers, and those with more and less experience.

Interestingly, we find no effect of client responsibility on how employment officers allocate work time to clients. In addition, we find no impact of client need on the probability that caseworkers provide labour market training to jobseekers. This demonstrates that it is important to separate various tasks and examine various dimensions of client deservingness in future research.

Why is there an impact of client need on how caseworkers allocate time but not on the decision about training? This becomes an especially interesting question given that jobseekers with a difficult situation in the labour market should receive priority in regard to labour market training in Sweden. One potential explanation can be grounded in the theoretical expectations put forward in this paper: deservingness cues are likely to be more important when street-level workers have more room to manoeuvre. The caseworkers can quite easily decide upon how to allocate their working time with little influence on other decisions. The boundary constraints are greater in regard to decisions about training. This is an extraordinary and expensive programme that is supposed to be mainly used when the employment officer has reasons to believe that it is a necessary intervention expected to generate a good result (i.e., the jobseeker receives a job). Although a quiet, insecure and passive client can be assumed to be in greater need of help from the authorities, it is also possible that there is a higher risk of a less positive outcome. This can make the employment officer more hesitant to use labour market training in such a situation. Additional theoretical elaborations based on the idea that boundary constraints have an impact on the importance of deservingness cues for street-level activities and appropriate empirical tests would be valuable contributions in future research.

However, the pattern becomes more complex if we consider the fact that we find an impact of client responsibility on decisions about training but not on the allocation of working time. In this case, the effect of deservingness exists only when boundary constraints are larger. How can we understand these findings? Perhaps the answer lies in the fact that employment officers should

not only help jobseekers but also control that they actively search for jobs in order for the unemployed to be eligible for unemployment insurance benefits, which requires attention on behalf of the frontline worker. Hence, Swedish employment officers combine the roles of helping and monitoring clients. If the jobseeker resigned from her last work just because she did not like it, caseworkers might interpret this as a signal that the client is unreliable and should be monitored more closely. If this is the case, a negative effect on decisions about an extraordinary labour market programme but no effect on the allocation of working time is logical.

Practitioners, managers and politicians should be aware that frontline workers' daily activities, for some tasks but not for others, are likely to be affected both by the extent and manners in which clients are perceived as deserving help by street-level bureaucrats. These workers' perceptions of deservingness are thus not neutral but have an impact on "who gets what, when and how" (Lasswell 1936) in a society. From a perspective of steering, it becomes important to determine how institutions and incentives should be arranged to generate a desired behaviour at the frontline of the public sector, since it is likely that decision-makers want some deservingness cues to make a difference in some situations but not in others.

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## Appendix

**Table A1** Basic characteristics of PES officers in Sweden and PES officers participating in the two survey experiments

	Swedish PES officers (2019)	Experiment on allocation of work time (2019)	Experiment on decision about labour market training (2018)
Female (%)	71	68	67
University degree (%)	67	66	67
Education from social/behavioural science (%)	34	35	35
Age (years)			
–34	15	8	13
35–54	57	61	60
55–	28	31	27

*Notes:* Figures for the population are taken from the Swedish National Audit Office (2020).

**Table A2** Sample and responses in the two survey experiments

	Experiment on allocation of work time (2019)		Experiment on decision about labour market training (2018)	
	Obs.	Percent	Obs.	Percent
Original sample receiving the survey				
All	3,856	100	4,338	100
With background data	3,779	98	4,338	100
Survey respondents				
All	1,965	51	2,262	52
With background data	1,896	49	2,183	50

*Notes:* Survey respondents who do not work as a PES officer with direct contact with jobseekers are excluded from the original samples: 606 in the experiment on allocation on work time and 563 in the experiment on the decision about labour market training.

**Table A3** Descriptive statistics, PES officers

	Allocation of work time		Decision about labour market training	
	Sample receiving the survey	Used sample	Sample receiving the survey	Used sample
Female	0.70	0.68	0.69	0.67
Age	46.72	49.16	46.24	47.61
Years of education <sup>a</sup>	14.62	14.52	14.58	14.56
University degree <sup>a</sup>	0.69	0.66	0.68	0.67
Type of education <sup>a</sup>				
Social and behav. science	0.37	0.35	0.36	0.35
Business and admin.	0.15	0.15	0.15	0.15
Human resources and work life	0.10	0.12	0.10	0.10
Social work	0.05	0.06	0.05	0.06
Teaching	0.07	0.07	0.08	0.09
Humanities	0.05	0.04	0.05	0.05
Law	0.02	0.02	0.02	0.02
Health care	0.06	0.05	0.06	0.07
Natural science, medicine, engineering, data	0.06	0.06	0.06	0.06
Industry, building, transportation	0.02	0.02	0.02	0.02
Other education	0.05	0.05	0.06	0.05
Years of experience	10.80	12.28	10.03	10.67
Caseworkers at the office	108.81	109.29	115.74	116.56
Labour market district				
20	0.14	0.15	0.14	0.16
21	0.13	0.15	0.13	0.15
30	0.13	0.13	0.12	0.13
31	0.10	0.10	0.10	0.10
32	0.08	0.07	0.09	0.09
40	0.22	0.20	0.21	0.17
41	0.07	0.07	0.08	0.09
42	0.13	0.13	0.13	0.12
Treatment group				
Case 1	0.23	0.25	0.27	0.28
Case 2	0.29	0.29	0.25	0.24
Case 3	0.25	0.24	0.24	0.23
Case 4	0.23	0.22	0.25	0.26
Observations	3,779	1,896	4,338	2,183

Notes: <sup>a</sup> Data on education (years of education, university degree and type of education) are missing for 46 additional PES officers in the original sample in the experiment on allocation of work time and for 231 PES officers in the experiment on the decision about labour market training.

**Table A4** Experiment on the allocation of work time: PES officers' background characteristics, by treatment

	Case 1: Low need, Low responsibility	Case 2: Low need, High responsibility	Case 3: High need, Low responsibility	Case 4: High need, High responsibility
Female	0.68	0.70	0.69	0.65
Age	48.51	49.37	49.67	49.05
Years of education	14.43	14.52	14.57	14.57
University degree	0.66	0.65	0.66	0.69
Type of education				
Social and behav. science	0.34	0.35	0.34	0.36
Business and admin.	0.15	0.15	0.14	0.14
Human resources and work life	0.15	0.12	0.13	0.08
Social work	0.06	0.07	0.05	0.05
Teaching	0.08	0.07	0.08	0.07
Humanities	0.02	0.04	0.05	0.06
Law	0.01	0.02	0.02	0.02
Health care	0.05	0.05	0.05	0.05
Natural science, medicine, engineering, data	0.04	0.06	0.06	0.09
Industry, building, transportation	0.02	0.01	0.03	0.03
Other education	0.05	0.07	0.05	0.03
Years of experience	12.71	12.12	12.68	11.59
Working full-time	0.82	0.88	0.84	0.87
Number of clients				
0	0.11	0.15	0.15	0.17
1–24	0.06	0.07	0.05	0.05
25–49	0.11	0.12	0.11	0.10
50–99	0.23	0.23	0.23	0.23
100–149	0.17	0.18	0.16	0.15
150–299	0.26	0.18	0.23	0.23
300–	0.07	0.07	0.07	0.07
Caseworkers at the office	98.77	131.62	101.73	98.97
Labour market district				
20	0.31	0.09	0.12	0.09
21	0.09	0.18	0.10	0.23
30	0.12	0.12	0.17	0.10
31	0.24	0.07	0.08	0.00
32	0.06	0.06	0.08	0.07
40	0.07	0.26	0.17	0.28
41	0.00	0.02	0.17	0.10
42	0.10	0.19	0.10	0.13
Observations	460	564	451	421

**Table A5** Experiment on the decision about labour market training: PES officers' background characteristics, by treatment

	Case 1: Low need, Low responsibility	Case 2: Low need, High responsibility	Case 3: High need, Low responsibility	Case 4: High need, High responsibility
Female	0.67	0.70	0.62	0.69
Age	48.96	46.21	47.58	47.51
Years of education	14.30	14.74	14.58	14.66
University degree	0.60	0.72	0.69	0.68
Type of education				
Social and behav. science	0.30	0.39	0.34	0.36
Business and admin.	0.16	0.12	0.13	0.18
Human resources and work life	0.09	0.12	0.11	0.10
Social work	0.07	0.06	0.05	0.06
Teaching	0.09	0.07	0.09	0.09
Humanities	0.05	0.04	0.05	0.04
Law	0.01	0.02	0.02	0.02
Health care	0.06	0.07	0.07	0.05
Natural science, medicine, engineering, data	0.05	0.06	0.06	0.05
Industry, building, transportation	0.03	0.01	0.03	0.02
Other education	0.08	0.04	0.04	0.04
Experience	11.11	9.53	11.05	10.94
Working full-time	0.83	0.83	0.88	0.84
Number of clients				
0	0.14	0.14	0.11	0.13
1–24	0.03	0.07	0.08	0.03
25–49	0.12	0.13	0.12	0.12
50–99	0.30	0.24	0.25	0.29
100–149	0.14	0.17	0.16	0.18
150–299	0.20	0.21	0.22	0.19
300–	0.05	0.04	0.06	0.05
Caseworkers at the office	126.62	125.04	107.38	105.99
Labour market district				
20	0.09	0.13	0.12	0.29
21	0.20	0.08	0.24	0.08
30	0.10	0.05	0.08	0.27
31	0.17	0.13	0.00	0.08
32	0.11	0.00	0.17	0.06
40	0.21	0.07	0.20	0.21
41	0.12	0.16	0.07	0.00
42	0.00	0.38	0.13	0.00
Observations	602	522	500	559

**Table A6** Robustness checks of the main results: statistical inference using randomised inference

Table	Variable	Model	Effect	p values		
				Cluster robust	Randomised inference	
<i>A. Experiment on allocation of time</i>						
1	Need	1	1.196	0.000***	0.000***	
		2	1.210	0.000***	0.000***	
		3	1.198	0.000***	0.000***	
		4	1.246	0.000***	0.000***	
		5	0.251	0.000***	0.000***	
	Responsibility	1	-0.120	0.046**	0.051*	
		2	-0.092	0.102	0.170	
		3	-0.008	0.199	0.290	
		4	-0.030	0.738	0.722	
		5	-0.017	0.152	0.280	
	Need × Responsibility	4	-0.095	0.382	0.285	
	<i>B. Experiment on decision about labour market training</i>					
	2	Need	1	-0.010	0.759	0.857
			2	-0.046	0.072*	0.415
3			-0.038	0.134	0.534	
4			-0.004	0.931	0.961	
Responsibility		1	-0.151	0.000***	0.031**	
		2	-0.168	0.000***	0.039**	
		3	-0.158	0.000***	0.047**	
		4	-0.122	0.002***	0.119	
Need × Responsibility		4	-0.072	0.193	0.355	

*Notes:* The p values reported in the column “cluster robust” correspond to the standard errors reported in the main text of the article. The p values reported in the column “randomised inference” are calculated in *Stata* using “ritest” (Heß 2017). \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.