

**Tenure and street-level bureaucrats:
how assessment tools are used
at the frontline of the public sector**

Anahita Assadi
Martin Lundin

The Institute for Evaluation of Labour Market and Education Policy (IFAU) is a research institute under the Swedish Ministry of Employment, situated in Uppsala. IFAU's objective is to promote, support and carry out scientific evaluations. The assignment includes: the effects of labour market and educational policies, studies of the functioning of the labour market and the labour market effects of social insurance policies. IFAU shall also disseminate its results so that they become accessible to different interested parties in Sweden and abroad.

IFAU also provides funding for research projects within its areas of interest. The deadline for applications is October 1 each year. Since the researchers at IFAU are mainly economists, researchers from other disciplines are encouraged to apply for funding.

IFAU is run by a Director-General. The institute has a scientific council, consisting of a chairman, the Director-General and five other members. Among other things, the scientific council proposes a decision for the allocation of research grants. A reference group including representatives for employer organizations and trade unions, as well as the ministries and authorities concerned is also connected to the institute.

Postal address: P.O. Box 513, 751 20 Uppsala

Visiting address: Kyrkogårdsgatan 6, Uppsala

Phone: +46 18 471 70 70

Fax: +46 18 471 70 71

ifau@ifau.uu.se

www.ifau.se

Papers published in the Working Paper Series should, according to the IFAU policy, have been discussed at seminars held at IFAU and at least one other academic forum, and have been read by one external and one internal referee. They need not, however, have undergone the standard scrutiny for publication in a scientific journal. The purpose of the Working Paper Series is to provide a factual basis for public policy and the public policy discussion.

ISSN 1651-1166

Tenure and street-level bureaucrats: how assessment tools are used at the frontline of the public sector^a

by

Anahita Assadi^b and Martin Lundin^c

September 16, 2015

Abstract

The tension between governance and professional discretion is a question of constant interest in public administration research, and studies on street-level bureaucracy thus aim to understand the actions of frontline workers. Largely missing in this literature, however, is research on how tenure affects behavior. To fill in this gap, we analyze how caseworkers with varying degrees of tenure respond to steering signals. We study the nationwide introduction of an assessment support tool to be used to assess clients' needs under the Swedish active labor market policy. We propose that accumulated experiences strengthen frontline workers' confidence. In turn, this makes them less responsive to formal policy signals, such as the assessment tool. Qualitative and quantitative methods are both used in support of the current research. The analysis suggests that as tenure increases, street-level bureaucrats, especially male caseworkers, tend to use the assessment tool less carefully and act in accordance with policy signals to a lesser extent. The qualitative analysis indicates that this pattern can partly be explained by the fact that increasing experience with meeting clients face-to-face increases caseworkers' perceived skills and confidence.

Keywords: Street-level bureaucracy, Policy implementation, Discretion, Tenure, Assessment support tool, Profiling, Active labor market policy.

^a We would like to thank Olof Åslund, Bo Bengtsson, Helena Holmlund and seminar participants at the ICPP conference in Milan 2015 and at IFAU 2014 for valuable comments on prior drafts of this article.

^b E-mail: anahita.assadi@ifau.uu.se

^c E-mail: martin.lundin@ifau.uu.se

Table of contents

1	Introduction	3
2	Street-level practice and the role of tenure.....	6
3	The Assessment support tool.....	7
4	A survey among caseworkers.....	10
4.1	Data and method.....	10
4.2	Findings	12
5	A case study at seven local offices	17
5.1	Data and method.....	17
5.2	Findings	18
6	Conclusion.....	23
	References	26
	Appendix	30

1 Introduction

Street-level bureaucrats are public employees, such as social workers, teachers and police officers, who directly interact with citizens and have considerable discretion in the execution of their work. In the wake of the seminal work by Michael Lipsky (1980), many scholars have argued that frontline staff play a key role in shaping policy outputs (e.g., Brehm and Gates 1997; Brodtkin 1997; Keiser 2010; May and Winter 2009; Maynard-Moody and Musheno 2003; Meyers and Vorsanger 2003). Latitude in interpreting rules, vague monitoring, limited resources and disparate demands for their services imply that street-level workers affect the delivery of public policy to a considerable extent.

From a perspective of democratic accountability, it is important that policy is implemented in accordance with the intentions of decision-makers who have been elected or appointed according to democratic procedures (Keiser and Soss 1998; Lundin 2007; Meyers and Vorsanger 2003; Stensöta 2012). At the same time, however, professional expertise is necessary for achieving policy goals. Bureaucrats working at the street-level have specific knowledge regarding local conditions, making their judgments most valuable for implementing policy in a reasonable manner. It could even be argued that frontline workers support democracy by increasing local influence, making it possible for those most affected by decisions to voice their opinions, and by generating legitimacy and responsiveness (Ferman 1990; Meyers and Vorsanger 2003; Vinzant and Crothers 1998; Scholz et al. 1991). Thus, street-level bureaucracy highlights the perennial tension between governance and discretion.¹

In 2012, the Swedish Public Employment Services (PES, in Swedish *Arbetsförmedlingen*) introduced the computer-based Assessment support tool (AST); a statistical profiling tool to always be used by PES caseworkers when meeting clients who want to register as job-seekers. This tool draws attention to the tension between steering and discretion. The AST consists of a number of questions regarding factors known to affect the risk of long-term unemployment; for example, a client's unemployment history and educational background. According to policy, caseworkers should interview their clients using the questions provided by the AST. Based on the information given, the tool

¹ Numerous variables have been suggested to explain street-level behavior; see, for example, Meyers and Vorsanger (2003) and Hill and Hupe (2002) for overviews. Recent studies on street-level bureaucracy include Keiser (2010), May and Winter (2009), Tummers, Steijn and Bekkers (2012) and Stensöta (2012).

estimates the client's risk of long-term unemployment and generates a recommendation on whether early and enhanced measures in support of the job-seeker are suitable. Caseworkers are instructed to carefully consider the recommendation. However, the guidelines also encourage frontline staff to make use of their professional expertise. Caseworkers are therefore not restricted by the outcome, although they are required to explain their decision in writing if the recommendation is not followed.

Recently, assessment tools have been introduced in several countries and within several policy areas (e.g., van Berkel and van der Aa 2012; Gillingham and Humphreys 2010; White, Hall and Peckover 2009). These tools have the potential to work as a steering mechanism, but it is also obvious that they can interfere with the professionalism of frontline workers; that is, the tension between governing and caseworker discretion becomes apparent.

In this article, we examine how the AST is utilized by PES officers in Sweden. In doing so, we aim to deepen our understanding of how street-level workers respond to this kind of steering signal. The question of particular interest to us is determining if and how years of experience being a frontline worker (tenure) changes behavior.² Tenure is often mentioned in research on street-level bureaucracy, and it is also occasionally included as a control variable when other factors are examined (e.g., Gill and Meier 2001; Riccucci et al. 2004; Stensöta 2012). However, detailed research on how tenure affects caseworkers' attitudes and actions in regard to steering signals seems to be lacking.

Approaching the question of tenure, we propose a hypothesis on the potential effect of tenure on street-level practices. The hypothesis is straightforward: increasing tenure implies accumulated experience; experience that is derived, for example, from meeting clients, discussing with colleagues, and learning more about the policy area. These experiences will, to a certain extent, replace formal policy decisions as the important impetus to street-level behavior. That is, newly-employed caseworkers and senior caseworkers are expected to systematically base their decisions on different inputs. We expect tenure to reduce the frontline staff's reliance on formal decisions and propose that increasing tenure decreases the use of the profiling tool. Quite surprisingly, previous research on street-level bureaucracy has not thoroughly analyzed the relationship between tenure and decision-making.

² Note that we use years of experience, (work) experience and (job) tenure synonymously throughout the article.

We employ a research design that combines quantitative and qualitative analysis: a web survey with more than 1,500 PES caseworkers is used to document the relationship between tenure and the use of the profiling tool. In-depth interviews with 23 caseworkers, who have varying degrees of job tenure, and seven local managers complement our quantitative data and provide additional insights into the underlying mechanisms.

The analysis shows that most caseworkers consult the AST. However, there is a large variation in how the tool is applied, especially in regard to the extent to which caseworkers act according to the recommendation. Furthermore, the findings suggest that tenure relates to practices. It is necessary to be careful with a causal interpretation of the results, but it appears that newcomers to the frontline apply the tool more frequently, consider the outcome more carefully, and follow the recommendation more frequently. An overall implication of the results is that the governing impact decreases in relation to increases in caseworker experience. Another implication, stemming from the first, is that clients might receive varying treatment depending on their caseworker's job tenure.

Three other findings are worth emphasizing: First, the importance of tenure seems to be more pronounced among male than female PES officers. This finding is in line with research suggesting that the structures and processes of organizations treat and influence women and men differently. Second, the relationship between tenure and the use of the AST is basically linear. Thus, we find no evidence that caseworkers go through an initial intense learning period wherein routines are established and then level out eventually. Instead, it appears that conduct gradually evolves over caseworkers' careers. Third, the interview responses indicate that an important mechanism is that through meeting more and more clients, the frontline worker becomes more confident in her or his ability to assess the needs of clients and consequently sees less need for using the statistical profiling tool.

The rest of the article is organized as follows: In section 2, we review prior research and put forward our theoretical argument. Section 3 gives an overview of the case examined in the article. Section 4 describes and reports our quantitative analysis, whereas the qualitative part of our study is presented in section 5. Lastly, in section 6, the findings are summarized and discussed.

2 Street-level practice and the role of tenure

Street-level bureaucrats are said to be experts in finding routines and short-cuts, as they handle the pressures of exceeding expectations on their work paired with limited resources (Lipsky 1980). The circumstances under which street-level bureaucrats conduct their work are understood as essential in forming their behaviors. These circumstances, however, most likely develop and change over time. Experiences of dealing with heavy caseloads, goal-conflicts and working against the clock, for example, are not gathered the first day on the job. Similarly, the use of discretion and strategies for coping with limited conditions are built up over time. The basis for our study is the assumption that a person who has been on the job for a shorter period will generally behave differently than someone who has been working at the street-level for several years. That is to say, becoming a street-level bureaucrat is an on-going process, which is highly influenced by accumulated experiences that increase along with job tenure.

As mentioned in the introduction, some studies on street-level bureaucracy suggest that job tenure is an important “control variable” (e.g., Stensöta 2012; Gill and Meier 2001; Riccucci et al. 2004; Buckley and Foldy 2009). However, these studies are not specifically designed to examine the role of tenure, which means that it is hard to say what influence tenure really has. One study actually focusing on tenure is Day and LaFrance’s (2012). They try to demonstrate the relationship between police officer experience and the priority given to standard operating procedures (SOPs). Day and LaFrance put forward a hypothesis suggesting that police officers will focus on and attach to rules during their first year as officers. Later on, however, they will develop independent decision-making skills and will begin to rely more on their own intuition. The results imply a correlation between increasing job tenure and a tendency to disregard SOPs. However, the authors mainly draw on research dealing with police work rather than addressing a wider discussion on street-level bureaucrats in general. Furthermore, the data are limited; the study is based on 97 survey responses. This case in itself is of interest, but the need for further analysis is clear.

There are previous studies dealing with job tenure, although not specifically in regard to street-level bureaucrats. For instance, according to human capital theory, experiences will lead to increased skills and, in turn, to better performance (Sturman 2002) and higher productivity (Shaw and Lazear 2008). Empirical findings often corroborate a

positive association between tenure and output. Moreover, it has been shown that a person's judgment of whether she or he has the capability to perform a task increases over time; perceived ability and self-perception is influenced by feedback (e.g., Colbeck, Cabrera and Terenzini 2001). Building on this research, it is reasonable to expect that experiences and (perceived) skills are accumulated over time. Through adding months and years to working-life, street-level workers will meet and interact with a growing number of clients and colleagues, and they will experience different responses and outcomes. Being exposed to different situations on the job, they will begin to develop a sense of what seems to work and will develop their strategies and practices accordingly. Thus, street-level bureaucrats will gradually become more inclined to judge themselves capable of performing their job tasks and, as a result, begin acting more independently. This is likely to affect their readiness to follow policy decisions; as they start listening more to their own judgment, outside signals, such as guidelines, instructions and information, are expected to have less impact on their actions. For example, assessment tools are likely to play a less important role for a senior caseworker than for a newcomer to the frontline.

3 The Assessment support tool

In Sweden, the PES is the authority responsible for carrying out national labor market policy. This task is mainly performed through local offices around the country. The caseworkers at these offices are key actors in putting policy into practice. PES officers provide job-seekers with information and counseling and decide whether someone is eligible for labor market programs and other activities to enhance their chances of getting a job. As the government has made preventing long-term unemployment a prioritized matter, targeting persons with difficult positions in the labor market is an especially important assignment.

Over the past decade, what type of assistance a job-seeker is entitled to has primarily been determined by her or his unemployment length; individuals with short spells of unemployment have not received much help (cf. Forslund and Vikström 2011; Sibbmark 2013). However, in January 2012, new instructions were presented. The government opened up the possibility for caseworkers to offer programs and intense counseling to job-seekers from day one. The purpose was to find and support persons with high risk

for long-term unemployment at an early stage, with the goal of bringing them closer to the labor market. Thus, the estimated risk for long-term unemployment, rather than actual unemployment time, became more important.

As available resources are limited, the PES can only offer early help to those job-seekers who are most at risk of not finding a job. To identify this group in an effective and uniform manner, the Assessment support tool was introduced in 2012. The AST consists of a web-based questionnaire to always be used by caseworkers when they register new job-seekers. The questions are intended to capture aspects known to affect the risk for long-term unemployment and include factors such as age, education, country of birth, unemployment history, work disabilities, and prior experiences and occupations. Caseworkers fill in the answers provided by the job-seeker and add additional contextual information (e.g., the local unemployment rate). The AST is based on a statistical model that takes the various factors into account, estimates the risk for long-term unemployment, and generates a recommendation on whether enhanced measures in support of the job-seeker are suitable. The outcome is presented on a four-grade scale, where the value “one” is a strong recommendation that there is no need for enhanced measures whereas “four” is a clear signal that enhanced measures are likely necessary. The outcomes in the middle (“two” and “three”) are vaguer.

The caseworkers are instructed to consider the outcome carefully; however, it is clearly stated that the tool is *not* there to replace their professional judgment. Nevertheless, if a caseworker should decide against the recommendation, she or he is required to provide a written explanation. In a survey conducted by us with local PES managers, 82 percent of the managers noted that it is “fairly” or “very” important that the caseworkers at their local office generally follow the recommendation generated by the AST.³ Thus, it is clear that local PES management see the AST as a central instrument in the process of assessing job-seekers abilities.

Studies from various countries indicate that profiling may increase the accuracy of active labor market policies (Benmarker, Carling and Forslund 2007; O’Leary, Wadner and Eberts 2006; O’Connell, McGuinness and Kelly 2012; Behncke, Frölich and Lechner

³ The survey was conducted as a web survey with all local head managers at the PES offices in Sweden. We received 115 responses, which is a response rate of 85 percent. The answers to the question (“how important is it that the caseworkers at your office follow the recommendation generated by the AST?”) were distributed as follows: “Very important” (35 percent), “Rather important” (47 percent), “Not so important” (17 percent), and “Not important at all” (1 percent).

2007). It is also important to note that similar assessment tools are utilized within many other policy areas (see e.g., Baker 2005; van Berkel and van der Aa 2012; Gillingham and Humphreys 2010; White, Hall and Peckover 2009). Decision-makers believe that this is an effective way to improve policies and make actions more rule-bound and uniform. However, there are a couple of studies indicating that, in practice, these tools are not a quick fix. A case study by Gillingham and Humphreys (2010), for example, suggests that a tool used within the field of child protection in the UK was not employed as intended. Caseworkers often regarded the tool as useless and made their decisions without consulting it. Sometimes, the tool was even manipulated to produce an outcome in accordance with a decision that had already been made. These findings show that there are obvious motives for learning more about the use of assessment tools by the frontline staff in the public sector.

Furthermore, there are other arguments for why this case is suitable for examining the hypothesis that newly-employed, street-level bureaucrats will rely on formal policy signals to a greater extent than experienced ones. First, by focusing on a new, well-known and specific way of steering local decisions (intended to affect all street-level workers in a similar way), we are able to derive more valid data than in a situation where we examine steering signals in a general sense. Here, we know that all of our respondents are referring to the same thing and that the AST is, in fact, an important element in their daily work. Second, while the AST implies a rather clear policy signal, it leaves room for caseworker discretion. This suits us well because variations in street-level behavior require a certain amount of discretion. Third, clients registering as job-seekers at the local PES office are not systematically assigned to certain caseworkers. The PES officer using the AST in a particular case is the one the client happens to meet when he or she enters the PES office for the first time.⁴ Accordingly, a correlation between job tenure and street-level behavior is unlikely to be explained by a situation where experienced caseworkers meet a different group of clients compared to newcomers.

⁴ Of course, this does not mean that clients are randomly assigned to a certain caseworker. However, the PES does not have much information about the client, and the possibility of directing the individual to a specific PES officer with certain skills and attributes is limited.

4 A survey among caseworkers

Now we turn to the empirical analysis, starting with the quantitative part of the study.

4.1 Data and method

Our quantitative data come from an internet-based survey among Swedish PES caseworkers and were collected in November and December 2013. We approached a random sample of 3,000 caseworkers, of which 1,970 replied,⁵ for an overall response rate of 66 percent. An analysis of background characteristics showed that the responders were similar to the sample of PES caseworkers, indicating that the data are representative (see Table A 1 in the appendix).

We used three survey questions as three different indicators of the dependent variable: First, we asked how often the caseworker actually *uses* the AST when meeting clients who want to register as job-seekers. Second, we asked to what extent she or he *considers* the recommendation generated by the tool. Third, we asked to what extent she or he *follows* the recommendation. The questions and response alternatives are reported in Table 1.

The response alternatives of the (dependent) variables are ordinal in all three cases. For practical reasons, we dichotomize the outcome measures in the statistical analysis. The outcomes receive a value of “1” if the respondent marked one of the alternatives in italics in Table 1; otherwise, the variables are coded “0”. For instance, the first outcome, variable (A), is coded “1” if the respondent answered “Always or almost always” and is coded “0” otherwise.

⁵ In the analysis, we make use of around 1,500 observations. This somewhat lower figure is mainly due to the fact that some caseworkers’ duties do not include the use of a profiling tool (283 individuals). Additionally, there are internal missing values for some variables.

Table 1 Dependent variables: survey questions and response alternatives

Variable	Survey question	Response alternatives
A. Use AST	How often do you use the AST when individuals are registered as job-seekers at the PES?	1) Never or almost never 2) Less than half of the cases 3) About half of the cases 4) More than half of the cases 5) <i>Always or almost always</i>
B. Consider recommendation from AST	To what extent do you consider the recommendation generated by the AST?	1) Not at all 2) Not that carefully 3) <i>Rather carefully</i> 4) <i>Very carefully</i>
C. Follow recommendation from AST	How often is your decision the same as the recommendation generated by the AST?	1) Never or almost never 2) Less than half of the cases 3) About half of the cases 4) <i>More than half of the cases</i> 5) <i>Always or almost always</i>

We use Linear Probability Models (LPM) to estimate the relationships between tenure and the three dichotomized outcomes. An alternative strategy would have been to make use of the full range of response alternatives and employ ordered logit models (Long 1997). We have two reasons for choosing LPM: First, if we use ordered logit models, it is not possible to include PES office fixed effects, which we ideally would like to include. Second, we estimated ordered logit models, and the results were very robust. Since the findings from the LPM analysis are easier to present, and easier to comprehend for the reader, ordered logit estimates are reported only in the appendix (Table A 3).

Our survey data were matched onto register data from the PES. This includes characteristics of the caseworker, of which the main independent variable is job tenure. Table A 2 in the appendix provides the specific data. On average, the PES officers have around ten years of experience, and approximately 25 percent have worked for less than two years. Therefore, there are many inexperienced caseworkers included in the sample. The maximum tenure in the sample is 47 years.

We include a number of control variables to decrease the risk of spurious correlations in the statistical analysis; see Table A 2 in the appendix. We assess potentially important background factors, such as the caseworker's age, sex and education. In most model specifications, we also control for caseworker attitudes toward the current labor market policy and the importance of following guidelines from the head office. It is possible that these attitudes affect both how PES officers use the AST and whether they decide

to stay on as a PES officer for a long time. As noted above, PES office fixed effects are incorporated to hold constant all contextual factors that might be important, such as clientele characteristics, local unemployment, office workload and management. In certain analyses, however, we replace the office fixed effects with the various PES office level control variables presented in Table A 2 (e.g., clientele characteristics, job-seeker/caseworker ratio and the local unemployment rate).

Before turning to the results, some cautionary points should be mentioned. First, it is always important to use caution when interpreting survey results. The use of survey responses means measuring how the caseworkers describe their own behavior rather than measuring their actual behavior. Another caveat is that we only have access to cross-sectional data, which limits the possibility of making causal claims; it would have been interesting to follow PES officers over time to determine how work experience changes behavior. It is difficult to be completely sure that the experienced group of caseworkers is not a selected group that differs systematically from the newly-employed in respects that we cannot control for in the analysis.⁶ We can take into account several important variables to decrease this potential problem, but we cannot be certain that we have managed to completely avoid it.

4.2 Findings

Table 2 describes how caseworkers use the AST and to what extent they consider and follow the recommendation generated by the tool.

Most caseworkers say that they use the profiling tool (69 percent) in every, or almost every, situation that it is applicable. However, there are many variations in the answers. This is even more apparent in regard to the other two variables presented in Table 2. Some caseworkers say that they consider the recommendation carefully, whereas others do not. Moreover, the extent to which the final decisions are in accordance with the actual recommendation varies greatly. Thus, it is obvious that some caseworkers put more emphasis on the profiling tool than do others.

⁶ One possibility is that more skilled and confident workers remain as PES officers, whereas more insecure and less skilled workers turn to other jobs. If this were true, a positive correlation between tenure and independent decision-making could be explained by a selection of individuals. The opposite is also possible; that is, skilled and confident caseworkers advance and develop their careers. While the first scenario over-estimates the importance of tenure, the second implies that we under-estimate the importance of tenure.

Table 2 The extent to which caseworkers use the Assessment support tool (AST)

Variable	Response alternatives	Answers (%)
Use AST	1) Never or almost never	7
	2) Less than half of the cases	8
	3) About half of the cases	7
	4) More than half of the cases	9
	5) Always or almost always	69
Consider recommendation from AST	1) Not at all	4
	2) Not that carefully	26
	3) Rather carefully	54
	4) Very carefully	16
Follow recommendation from AST	1) Never or almost never	12
	2) Less than half of the cases	24
	3) About half of the cases	26
	4) More than half of the cases	23
	5) Always or almost always	14

Figure 1 describes how the AST is used by caseworkers with different job tenures. The general impression is that there is a decrease in the extent to which the AST is used as experiences increase. For example, in the group of PES officers with 0–5 years of experience, approximately 73 percent say that the tool is used “always or almost always”. The corresponding figure among those with over 25 years of experience is approximately 64 percent. This is a first indication that job tenure might explain some part of the variation in how the profiling tool is employed by PES officers.

The next step is to estimate regression models. Table 3 shows the results from different model specifications: In column (1), we control for caseworker background variables and the various PES office level control variables. In column (2), PES office fixed effects are incorporated. In column (3), we also take into account caseworker attitudes towards the current labor market policy and the extent to which caseworkers think it is important to follow head office guidelines and directives. Last, in column (4), a second-order polynomial of tenure (*tenure*²) is added to the specification. This is motivated by the possibility that caseworkers’ perceived ability and confidence could be built up more intensely in the first few years and that the effect of tenure then weakens over time. Similarly, Day and LaFrance (2012) found such an association between tenure and street-level behavior in their study of police officers.

Figure 1 The extent to which caseworkers use the AST, by tenure

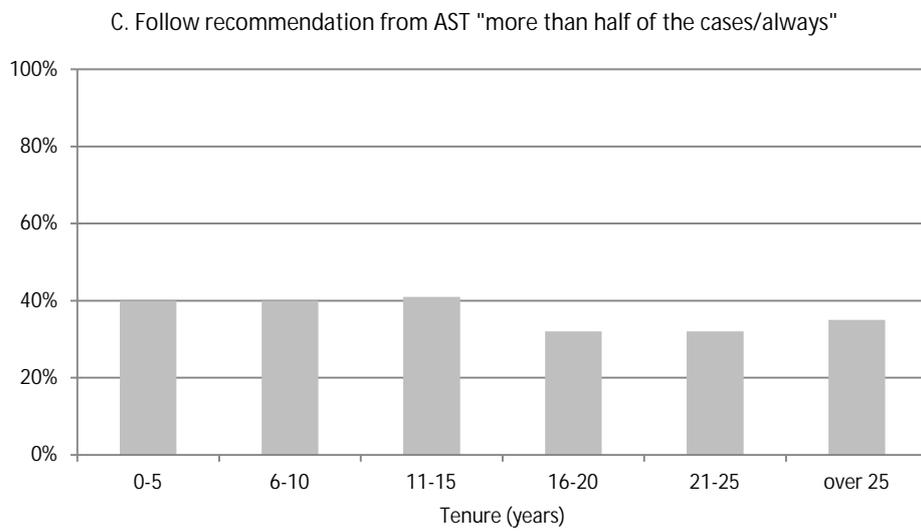
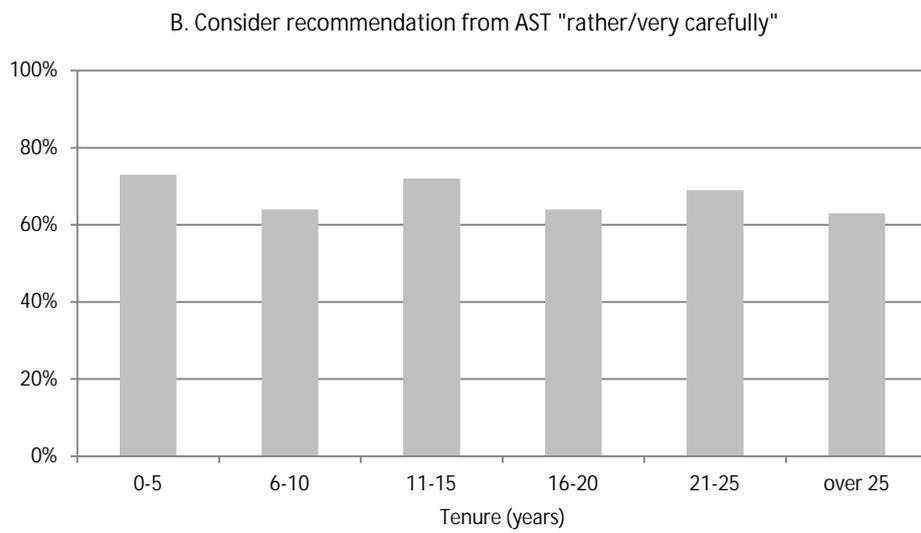
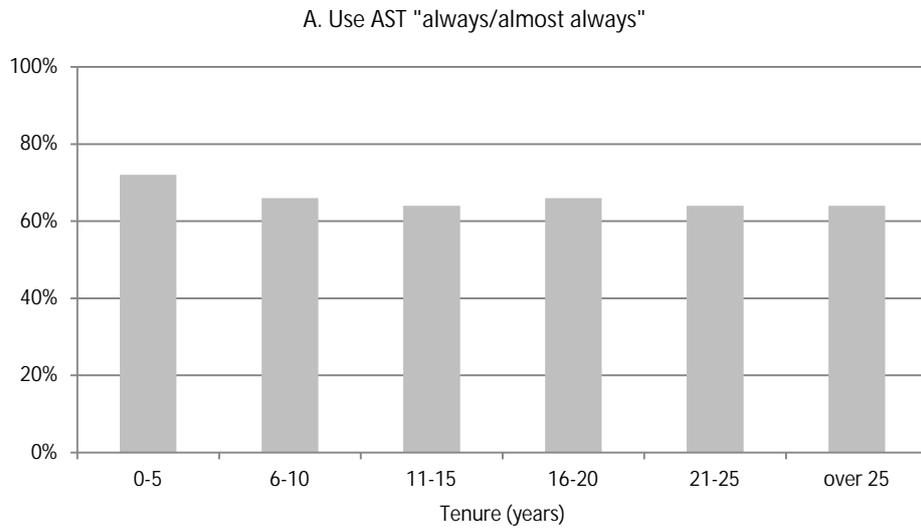


Table 3 PES caseworkers' use of the profiling tool (AST) depending on their job tenure

	(1)	(2)	(3)	(4)
<u>A. Use AST</u>				
Tenure	-0.006*** (0.002)	-0.005*** (0.002)	-0.005*** (0.002)	-0.008* (0.004)
Tenure ²				0.000 (0.000)
Mean of dependent variable	0.69	0.69	0.69	0.69
Adjusted R ²	0.06	0.11	0.13	0.13
No. obs.	1,519	1,522	1,481	1,481
<u>B. Consider recommendation from AST</u>				
Tenure	-0.005** (0.002)	-0.004** (0.002)	-0.004** (0.002)	-0.007 (0.004)
Tenure ²				0.000 (0.000)
Mean of dependent variable	0.70	0.70	0.70	0.70
Adjusted R ²	0.02	0.04	0.05	0.05
No. obs.	1,499	1,502	1,464	1,464
<u>C. Follow recommendation from AST</u>				
Tenure	-0.005** (0.002)	-0.004** (0.002)	-0.004** (0.002)	-0.008 (0.005)
Tenure ²				0.000 (0.000)
Mean of dependent variable	0.38	0.38	0.38	0.38
Adjusted R ²	0.02	0.04	0.06	0.06
No. obs.	1,475	1,478	1,443	1,443
Caseworker background variables	Yes	Yes	Yes	Yes
Caseworker attitudinal variables	No	No	Yes	Yes
PES office control variables	Yes	No	No	No
PES office fixed effects	No	Yes	Yes	Yes

Notes: LPM regression coefficients, with robust standard errors within parentheses. For a description of control variables, see Table A 2 in the appendix. * = sig. at <0.10; ** = sig. at <0.05; *** = sig. at <0.01.

Table 3 shows the negative coefficients of job tenure for all three outcome measures: experienced frontline workers are inclined to employ the tool less frequently, consider the recommendation generated from the AST less carefully, and make decisions that deviate from the given recommendation more frequently. There is really no difference between model specifications (1)–(3). We find positive coefficients of the squared term of tenure in the last column. However, the estimates are tiny and not statistically significant. Moreover, explained variance (R²) is not increased. This indicates that the

association is linear. Accordingly, we find no evidence that caseworkers go through an initial learning period wherein routines are established. Instead, it seems like conduct gradually evolves over caseworkers' careers.

The regression coefficients of tenure are approximately 0.005 in all cases. Adding one extra year of experience decreases the probability that the tool is used “always or almost always”, that the recommendation is considered “rather/very carefully”, and that the recommendation is followed in more than half of the cases by approximately 0.005, holding all other variables in the model constant. This means that if we compare newcomers (*tenure* = 0) to caseworkers with average experience (*tenure* = 10), the probability that the tool is used in every applicable situation is 0.05 lower in the latter group. Comparing the probability between newcomers and very experienced caseworkers (*tenure* = 20) shows a difference of 0.10. Our overall interpretation is that these differences are clearly important (although they might not be considered very large).⁷

Some studies that look at the effects of job experience on various outcomes identify gender differences. For example, Munasinghe, Reif and Henriques (2008) find that the wage return of an extra year of labor market experience is higher for men than for women. We also know from several studies on street-level bureaucracy that gender matters in various respects (e.g., Keiser et al. 2002; Wilkins and Keiser 2006). Moreover, within the field of feminist theory, it is argued that organizations (e.g., public authorities) are gendered and that this is manifested in daily routines, thoughts, structures and processes. Consequently, men and women are often treated differently within an organization (Kanter 1977; Acker 1990; Mählck 2001). Given this prior research, it is interesting to examine differences between women and men: Is the effect of job tenure on street-level behavior similar for male and female caseworkers? Thus, we split up the sample based on gender in Table 4.

⁷ Table A 3 in the appendix shows two important robustness checks: first, the findings are not altered if we use ordered logit analysis instead of LPM. Second, excluding PES officers employed after the introduction of the profiling tool introduces some uncertainty to the conclusions. Individuals employed after the AST was implemented had not worked under any other condition; it is possible that the results are driven by this group. When we exclude them, the regression coefficients are still negative, but they become marginally lower, and for two of three outcome measures, the association is statistically insignificant at the conventional level. This exercise implies that the number of observations decreases by almost 30 percent (over 400 observations) and that statistical precision therefore becomes an issue. Thus, given the small drop in the size of the effects, we do not believe that the conclusions should be modified.

Table 4 PES caseworkers' use of the profiling tool (AST) depending on job tenure: Gender differences

	A. Use AST		B. Consider recommendation from AST		C. Follow recommendation from AST	
	Male	Female	Male	Female	Male	Female
Tenure	-0.011*** (0.003)	-0.004** (0.002)	-0.011*** (0.003)	-0.003 (0.002)	-0.007* (0.003)	-0.004* (0.002)
Adjusted R ²	0.09	0.06	0.05	0.02	0.01	0.05
No. obs.	523	955	519	942	509	931

Notes: LPM regression coefficients, with robust standard errors within parentheses. Caseworker background variables and attitudinal variables, along with PES office level control variables, are included as controls in the model specifications. For a description of the control variables, see Table A 2 in the appendix. * = sig. at <0.10; ** = sig. at <0.05; *** = sig. at <0.01.

An interesting pattern emerges. For all three outcome measures, we find very large, negative and statistically significant effects among male caseworkers. Among female caseworkers, the effect is much smaller, although still negative. It seems that male street-level bureaucrats, as they become more experienced, change their behavior more than female workers do. Given the empirical material at hand, we are not able to explain the pattern. We simply note that the gender difference is, in fact, clear.⁸

5 A case study at seven local offices

Using in-depth interviews with caseworkers and their managers, we aim to deepen our understanding of the mechanisms involved in changing street-level behavior over time. The qualitative part of the study is thus presented here.

5.1 Data and method

From December 2012 to April 2013, visiting interviews were conducted at seven PES offices located in different parts of Sweden. Offices in urban and rural regions, large and small offices, and offices situated in areas with varying levels of unemployment were visited. At the offices, we interviewed the manager and three to four caseworkers. This selection was based on the idea of procuring variation in job tenure. In total, we interviewed 23 caseworkers and seven office managers. The interviews were individual, semi-structured and lasted about one hour. All but two were recorded and later transcribed.

⁸ We have examined whether the importance of tenure differs in other dimensions as well. Two results are worth mentioning: it appears that tenure is less important when the labor market situation is worse (unemployment rate over the median), whereas the effect of tenure is not dependent on the educational level of the caseworker.

We know from the survey that the probability to use the AST and carefully consider its outcome decreases along with increases in tenure. We have also demonstrated that behavior gradually changes over time. In our analysis of the interviews, we look for possible mechanisms explaining these results. If experienced caseworkers are less ready to act according to steering signals, what is replacing the impact that steering initially had? What is it specifically that happens over time? Is it really a change in perceived skills and confidence that influences conduct?

One limitation worth emphasizing is the fact that the interviews were *not* constructed with the single purpose of disentangling the impact of job tenure from the influence of steering signals. Instead, the purpose was more general: describing and explaining street-level practices when caseworkers use the AST. Trying to understand the role of tenure was one essential aspect of the study, but the findings should be interpreted with some caution.

In our analysis of the interviews, we divide the caseworkers into three groups based on their experience: *newcomers* have been PES caseworkers for less than two years (ten individuals), *established* ones have been caseworkers for more than two years but less than eight years (seven individuals), and *seniors* have at least eight years of experience (six individuals).⁹ This categorization serves as a ground for comparison when we study the material. The interviews were carefully read through, focusing on how PES officers describe their role and their decision-making process, their views regarding the AST, and their actual behavior in relation to the AST.

5.2 Findings

The interviews support the conclusion that the profiling tool is employed in various ways by various caseworkers. All of the individuals we interviewed are aware of the tool: some of them like it, whereas others think that it is a waste of time. Some of them consider the recommendation carefully, whereas others do not. A large majority claim that they nearly always pose the questions to the job-seekers, but three of the 23 caseworkers admit that they often do not use the tool. The dominant explanation for not using the tool, or for not placing much emphasis on the AST in the interviews is that the respondents do not think that the tool helps them (that much).

⁹ The most experienced individual in our sample had been working as a PES caseworker for 18 years.

Comparing caseworkers with varying tenure, we find there is a general difference in their readiness to listen to and act on steering signals. Established and senior caseworkers generally seem to feel quite comfortable disregarding the AST, whereas newcomers more often claim to rely on the tool to some extent. Describing how they go about assessing the need of a client, senior and established caseworkers often refer to their own experiences in meeting and engaging with job seekers, and they express confidence in their own ability to make decisions on what type of assistance should be offered to different clients. This tendency is clearer within the group of senior caseworkers, which suggests that the most experienced caseworkers are the firmest believers in their own assessments and capabilities. We will return to the group of established workers as well as the newcomers momentarily, but first let us look at examples of how the seniors reason. Quoted here are two caseworkers describing how they see little need for a tool to guide their decisions and claiming their professional judgment to be independent of the AST:

This tool, so to speak, for those of us who have been working for a long time, you can somehow tell without really having to use the tool [...] I think if you are completely new at the PES, you might find it useful in a different way. But, if you have met as many people as I have, you can make an assessment pretty quickly.

Senior 1 (office D)

There's really no difference in my way of working now compared to when we didn't have the tool. [...] If I am of the opinion that help is needed, the outcome of the tool doesn't matter. As I said, it's just a support tool.

Senior 2 (office A)

Professional judgment replacing the need of an assessment support tool is sometimes described as based on vast experience with face-to-face encounters with clients, such as in the first quote above. Moreover, when asked if the AST had changed their way of working, none of the seniors said that the tool had altered their actions in any important sense.

However, associating one's own perceived ability with the degree to which one is guided by the tool is not a feature reserved for experienced caseworkers: this is also the case in regard to newcomers. The analysis shows that this group tends to express more insecurity regarding the job and their perceived ability to handle different tasks.

Newcomers often talk about the complexity of their work and mention the need for instructions and support from colleagues and office managers:

It's an incredibly complex job; I'm still in a learning process so to speak. [...] Luckily, you have a continuous support from your colleagues.

Newcomer 1 (office A)

Furthermore, some of the newcomers specifically express a need for support from the AST. They also describe themselves as feeling restricted by the tool. Quoted here are two newcomers reflecting on their own judgments in relation to the recommendations generated by the profiling tool:

If I don't have anything to strengthen my own assessment [that early measures are needed], then it's going to be a 'no' to early measures.

Newcomer 2 (office B)

Having something [the AST] to lean against is good. Well, if you always have your own judgment and nothing to lean against, then you are vulnerable. Because, someone else could make a different assessment. But, having a tool makes us more confident as caseworkers.

Newcomer 3 (office C)

The first caseworker claims that unless there is something tangible to motivate an opposing decision, she will act on the recommendation generated by the AST even if her own assessment is contradictory; perceived skills and confidence seem to be lacking in this case. The second PES officer describes the need for something to back up her assessment. She also says that the profiling tool guides her decision and strengthens her confidence. These two caseworkers exemplify how steering signals and guidelines, such as imposing a standardized procedure for assessing clients, seem to have an impact on the decision-making of caseworkers when they are fairly new on the job. One plausible interpretation is that newcomers have not yet developed the required professional confidence.

The group in the middle, the established caseworkers, is a bit more ambiguous in this regard, as mentioned earlier. They tend to portray themselves as relying on their own professional judgment to a greater extent than the newcomers, but, at the same time, they describe feeling more bound by the AST than the seniors do:

Well you always have your own assessment as well, and the longer you've been working and meeting with people, you become somewhat of an expert, a good judge of character. But, of course you're not always right. In that sense it feels pretty good to have the AST, I think.

Established 1 (office D)

Surely you feel bound by it, because the AST is there for a reason. They want to do a screening somehow. But, at the same time, I feel like common sense is most important.

Established 2 (office B)

Referring to meeting job seekers on a daily basis, the first caseworker, who has been a PES officer for seven years, describes developing a sort of expertise based on these experiences. This is a similar method of reasoning as in the quote by the caseworker *Senior 1* above. On the other hand, both caseworkers quoted say they feel influenced or even limited by the tool to some extent. The interviewed established caseworkers do use previous experiences gathered from meeting with clients, but they are still impressionable with regard to responding to steering signals. One way of putting it might be that the attentive newcomer becomes an independent senior over time and that this is something that happens gradually rather than overnight.

The difference in observed behavior between caseworkers with varying degrees of tenure is further supported by stories told by some of the office managers. They discuss the insecurities of newly-employed caseworkers in relation to more experienced ones with regard to assessing client needs and using the AST. Their general conclusion is that experienced caseworkers are better able to make professional judgments, whereas the newcomers are more easily influenced by the AST. Thus, managers connect experience not only to perceived ability but also to actual ability to perform the job in a qualified manner. They also describe the newcomers' readiness to act according to the recommendation of the AST as somewhat of a problem, saying that it is regrettable if caseworkers replace their own assessments with the recommendation of the AST:

I feel the timing was a bit unfortunate, because we had so many new caseworkers when the AST was introduced in January, February, March last year. They didn't have the ability to make that professional judgment, and I think it went wrong here, I think they trusted too much in the AST.

Manager 1 (office C)

We should keep in mind that we have employed many new caseworkers this year. And when you are new, you really want to do right. Sure, experienced workers want to do right as well. But, thanks to the experience you have, it is easier for you to prioritize, you have shortcuts that allow you to bring about a result. When you are new, it is really difficult, I mean you have to do as you are told. That is an important element, when you are learning your job you get many orders on what to do. And you are not done building up this ability to assess the need [of a client]. Of course, the AST is going to have a bigger impact then.

Manager 2 (office G)

A potential conclusion to be drawn here is that from a managerial perspective, giving steering signals proportional influence in caseworker decisions requires a certain amount of experience on the job.

In sum, the interview responses support the results of the survey; we find that caseworkers describe their behavior and their decision-making processes differently when we compare their reasoning based on tenure. Searching for mechanisms explaining this change, we conclude that a key factor could be the accumulated experience of meeting with different clients. Years of working with job seekers with varying backgrounds and capacities has given the caseworkers a stronger sense of professional confidence; they feel they know what certain types of job seekers need. This confidence seems to be replacing the impact of steering signals, to some extent at least. Thus, in this case, perceived ability to make these calls regardless of the AST has made established and senior caseworkers less ready to use or even consider the outcome of the tool.

It is worth noting that the apparent difference between newcomers and established and senior workers is not without exceptions. While all of the caseworkers with lower levels of confidence and perceived ability are found in the newcomer group, there are also a few caseworkers in this group who express fairly strong confidence levels. This suggests that while tenure is a strong indicator of perceived ability, it is not a completely decisive factor. Some individuals are going to gain confidence much faster than others. The two caseworkers quoted below, for example, have only been working for one year. However, they both consider themselves quite able to make independent decisions:

I don't feel bound by the tool at all. At first you did. Maybe because you're new and you have to use it. But, now I don't feel bound by it at all, my assessment is what counts.

Newcomer 4 (office F)

Actually, I don't feel bound by it at all. I think our managers have been clear on the fact that the AST is there to support our professional judgment. And I feel it's important to use the tool in that way.

Newcomer 5 (office D)

The first PES officer describes a difference over time, saying that he felt restricted by the tool at first. With less than a year of experience working as a caseworker, however, he seems to have grown confident and independent. His answer is therefore in line with the idea that independent decision-making develops over time and, in this case, at a very rapid pace.

Of course, other mechanisms could also be important. The caseworker's job situation and job security is one possible explanation: newcomers might be more afraid of losing their job or not receiving interesting tasks or promotions. Thus, they perhaps do as they are told to a greater extent than the more established frontline workers. Another possibility is that newcomers might have received a better introduction to the profiling tool (during their introduction period as a PES officer). However, our interviews do not indicate that these factors are important, although more research is necessary to illuminate these questions more thoroughly.

6 Conclusion

Our study suggests that street-level behavior changes along with increasing job tenure. Specifically, we look at the readiness to listen to, and act on, formal steering signals in the form of an assessment support tool introduced as part of the Swedish active labor market policy in 2012.

We find large variations in how the tool is employed at the local level and that job tenure is related to how caseworkers let the tool influence their conduct. It is necessary to be cautious with a causal interpretation of the results, but our findings imply that newly-employed caseworkers are more likely to use the tool and to consider and follow the resulting recommendation, while more senior workers are more likely to disregard the tool. This finding is in line with the findings of Day and LaFrance (2012), which is

one of few studies that examine the impact of tenure on street-level behavior. However, where their study suggests a non-linear relationship between tenure and behavior, our analysis indicates a more gradual and linear relationship over caseworkers' entire careers. Our results suggest that it is not an initial learning period that explains the difference between experienced and inexperienced caseworkers.

Using interviews to better understand the mechanisms at hand, we find that a key factor potentially explaining the differences between caseworkers with varying degrees of tenure is experience with actually meeting clients. The accumulated experience of personally having seen many different job seekers over the years strengthens a case-worker's perceived ability to assess client needs, causing more experienced workers to disregard formal policy signals in favor of their own professional judgments. Admittedly, other mechanisms might also be important, and additional research is required to shed more light on these matters.

Another interesting finding is that it seems like tenure has a greater effect on men than on women. Since neither the survey nor the interviews were specifically designed to explain gender differences, we can merely note that this pattern is a question of great interest and in need of further studies. We think that at this point, additional qualitative research would be very valuable to better understand the reasons behind these patterns.

Looking at the possible wider implications of the empirical findings, one question is whether the established correlation between tenure and how the profiling tool is used is actually a problem. This question does not hold any definite answer. Our results indicate that politicians and managers are going to face more obstacles when steering senior street-level bureaucrats, especially senior male caseworkers. Policies might also be implemented in a less uniform manner by the experienced group of caseworkers, since they seem to be primarily guided by their own judgment rather than by a general tool. This potentially threatens a key value within public administration, namely, that similar cases should be treated in similar ways. On the other hand, independence in street-level bureaucrats could ensure that their experience and knowledge is used more effectively within the public sector. In this sense, it is quite natural that newcomers with less professional knowledge rely more on instructions and steering signals while more experienced workers are more selective.

It is always difficult to know the scope conditions of a study, and the only way to learn more about the possibility of generalizing the findings is to conduct additional research in other contexts. We believe that two aspects are worth paying extra attention to in future studies: first, the type of steering tool or policy decision at hand is likely going to matter to the response amongst street-level bureaucrats. We have analyzed the use of a policy assessment tool. This is a specific steering instrument, and it is possible that tenure makes less of a difference in situations where the direction is more detailed or manifested as a mandatory regulation. Moreover, the AST is a new method of steering. The impact of tenure could be different if we look at an instrument or policy that has been established for a long time. Second, caseworkers' perceived skills and confidence might develop differently in different policy areas, making tenure more or less important. The character of occupations varies; for instance, norms on how to behave as a nurse, a police officer, a teacher and a PES caseworker likely differ.

To conclude, the main message from this study is that the behaviors of individual street-level bureaucrats develop over time: a newcomer and a senior frontline worker will act differently. It is important that we continue to try to better understand these dynamics, because the frontline of the public sector is a key arena with regard to deciding what becomes of policy in practice.

References

- Acker, J. (1990), "Hierarchies, jobs, bodies: A theory of gendered organizations", *Gender & Society* 4:139–158.
- Baker, K. (2005), "Assessment in youth justice: Professional discretion and the use of Asset", *Youth Justice* 5:106–122.
- Behncke, S., M. Frölich and M. Lechner (2007), "Targeting labour market programmes – results from a randomised experiment", Discussion paper no. 3085, IZA, Bonn.
- Benmarker, H., K. Carling, and A. Forslund (2007), "Vem blir långtidsarbetslös?", Report 2007:20, IFAU, Uppsala.
- van Berkel, R. and P. van der Aa (2012), "Activation work: Policy programme administration or professional service provision?", *Journal of Social Policy* 41(3):493–510.
- Brehm, J. and S. Gates (1997), *Working, shirking and sabotage: Bureaucratic response to a democratic public*, University of Michigan Press, Ann Arbor.
- Brodkin, E. Z. (1997), "Inside the welfare contract: Discretion and accountability in state welfare administration", *Social Service Review* 71(1):490–505.
- Buckley, T. R. and E. G. Foldy (2009), "Re-creating street-level practice: The role of routines, work groups, and team learning", *Journal of Public Administration Research and Theory* 20:23–52.
- Colbeck, C. L., A. F. Cabrera and P.T. Terenzini (2001), "Learning professional confidence: Linking teaching practices, students' self-perceptions, and gender", *The Review of Higher Education* 24:173–191.
- Day, J. and C. LaFrance (2012), "The role of experience in prioritizing adherence to SOPs in police agencies", *Public Organization Review* 13:37–48.
- Ferman, B. (1990), "When failure is success: Implementation and Madisonian government", in D. J. Palumbo and D. J. Calista (eds.), *Implementation and the policy process*, Greenwood Press, New York.
- Forslund, A. and J. Vikström (2011), "Arbetsmarknadspolitikens effekter på sysselsättning och arbetslöshet – en översikt", Report 2011:7, IFAU, Uppsala.

- Gill, J. and K. J. Meier (2001), “Ralph’s pretty-good grocery versus Ralph’s super market: Separating excellent agencies from the good ones”, *Public Administration Review* 61(1):9–17.
- Gillingham, P. and C. Humphreys (2010), “Child protection practitioners and decision-making tools: Observations and reflections from the front line”, *British Journal of Social Work* 40:2598–2616.
- Hill, M. and P. Hupe (2002), *Implementing Public Policy*, Sage, London.
- Kanter, R. M. (1977), *Men and women of the corporation*, Basic Books, New York.
- Keiser, L. R. (2010), “Understanding street-level bureaucrats’ decision making: Determining eligibility in the social security disability program”, *Public Administration Review* 70:247–257.
- Keiser, L. R. and J. Soss (1998), “With good cause: Bureaucratic discretion and the politics of child support enforcement”, *American Journal of Political Science* 42(4):1133–1156.
- Keiser, L. R., V. K. Wilkins, K. J. Meier and C. A. Holland (2002), “Lipstick and logarithms: Gender, institutional context, and representative bureaucracy”, *American Political Science Review* 96(3):553–564.
- Lipsky, M. (1980), *Street-level bureaucracy: Dilemmas of the individual in public services*, Sage, New York.
- Long, J. S. (1997), *Regression models for categorical and limited dependent variables*, Sage, Thousand Oaks.
- Lundin, M. (2007), “When does cooperation improve public policy implementation?”, *Policy Studies Journal* 35(4):629–652.
- Mählck, P. (2001), “Mapping gender differences in scientific careers in social and bibliometric space”, *Science, Technology, & Human Values* 26:167–190.
- May, P. J. and S. C. Winter (2009), “Politicians, managers, and street-level bureaucrats: Influences on policy implementation”, *Journal of Public Administration Research and Theory* 19:453–476.

- Maynard-Moody, S. and M. Musheno (2003), *Cops, teachers, counselors: Stories from the front lines of public service*, The University of Michigan Press, Michigan.
- Meyers, M. K. and S. Vorsanger (2003), “Street-level bureaucrats and the implementation of public policy”, in Peters. B. G. and J. Pierre (ed.), *Handbook of public administration*, Sage, London.
- Munasinghe, L., T. Reif and A. Henriques (2008), “Gender gap in wage returns to job tenure and experience”, *Labour Economics* 15:1296–1316.
- O’Connell, P. J., S. McGuinness and E. Kelly (2012), “The transition from short- to long-term unemployment: A statistical profiling model for Ireland”, *The Economic and Social Review* vol. 43, s. 135–164.
- O’Leary, C. J., S. A. Wadner and R. W. Ebers (2006), “Profiling for public workforce investment programs in the United States”, Institute für Arbeitsmarkt und Berufsforschung, Conference on Labour Market Strategies Based on Profiling, Nuremberg 11–13 oktober 2006.
- Riccucci, N. M., Meyers, M. K., Lurie, I. and J. S. Han (2004), “The implementation of welfare reform policy: The role of public managers in front-line practices”, *Public Administration Review* 64(4):438–448.
- Scholz, J. T., J. Twombly and B. Headrick (1991), “Street-level political controls over federal bureaucracy”, *American Political Science Review* 85(3):829–850.
- Shaw, K. and E. P. Lazear (2008), “Tenure and output”, *Labour Economics* 15:705–724.
- Sibbmark, K. (2013), “Arbetsmarknadspolitisk översikt”, Report 2013:22, IFAU, Uppsala.
- Stensöta, H. O. (2012), “Political influence on street-level bureaucratic outcome: Testing the interaction between bureaucratic ideology and local community political orientation”, *Journal of Public Administration Research and Theory* 22:553–571.
- Sturman, M. C. (2003), “Searching for the inverted u-shaped relationship between time and performance: Meta-analyses of the experience/performance, tenure/performance and age/performance relationships”, *Journal of Management* 29(5):609–640.

- Tummers, L., B. Steijn and V. Bekkers (2012), “Explaining the willingness of public professionals to implement public policies: Content, context, and personality characteristics”, *Public Administration* 90:716–736.
- Vinzant, J. C. and L. Crothers (1998), *Street-level leadership: Discretion and legitimacy in front-line public service*, Georgetown University Press, Washington, DC.
- White, S., C. Hall and S. Peckover (2009), “The descriptive tyranny in the common assessment framework: Technologies of categorization and professional practice in child welfare”, *British Journal of Social Work* 39:1197 –1217.
- Wilkins, V. M. and L. R. Keiser (2006), “Linking passive and active representation by gender: The case of child support”, *Journal of Public Administration Research and Theory* 16(1):87–102.

Appendix

Table A 1 Descriptive statistics: the random sample of PES caseworkers and the web survey respondents

	Sample	Respondents
PES Caseworker characteristics		
Female (%)	69	66
College degree (%)	80	78
Average age (years)	45	46
Average tenure (years)	10	10
PES office characteristics		
Urban area (%)	31	28
Rural area (%)	3	3
Average local unemployment (%)	9	9
Average number of employees at the PES office	65	63
Average number of job-seekers registered at the PES office	3,512	3,370
Share of clients being long-term unemployed (%)	24	24
Share of clients under 25 years of age (%)	23	23
Number of observations	3,000	1,970 (66 %)

Table A 2 Descriptive statistics

Variable	Source	Mean/Proportion	S.D.	Min	Max
<i><u>Main variables</u></i>					
Use AST (always/almost always)	Survey	0.69	0.46	0	1
Consider recommendation from AST (carefully)	Survey	0.70	0.46	0	1
Follow recommendation from AST (>50% of cases)	Survey	0.38	0.49	0	1
Tenure (years)	PES register	10.21	9.88	0	47
<i><u>Caseworker background variables</u></i>					
Age (years)	PES register	46.04	10.76	22	69
Female (1=Yes; 0=No)	PES register	0.66			
College degree (1=Yes; 0=No)	PES register	0.62			
Educational background	Survey				
Social work		0.30			
Administration, economics, law and management		0.16			
Social sciences		0.17			
Human sciences		0.10			
Pedagogic/teacher		0.10			
Other education		0.17			
<i><u>Caseworker attitudinal variables</u></i>					
The importance of following guidelines from the head office (1–5, where 5="very important")	Survey	3.71	0.95	1	5
Attitudes towards the current labor market policy (1–5, where 5="very positive")	Survey	2.67	0.93	1	5
<i><u>PES office control variables</u></i>					
Number of caseworkers	PES register	62.63	37.10	1	149
Job-seekers/caseworker	PES register	53.70	6.92	14.74	203.50
Client characteristics	PES register				
≤ 25 years of age (%)		23.46	7.05	0.58	74.10
≥ 55 years of age (%)		14.85	2.91	0.00	28.09
At least high school degree (%)		70.91	7.82	45.59	97.81
Long term unemployed (%)		23.81	6.18	0.00	36.96
Born outside Nordic countries (%)		36.39	16.04	5.34	99.92
Work disabled (%)		21.93	11.40	0.00	97.32
Local unemployment rate (%)	Statistics Sweden	9.05	2.01	4.20	14.30
Location (%)	Statistics Sweden				
Urban area		28.33			
Rural area		3.41			
Other		68.26			
Municipal population (# citizens)	Statistics Sweden				
– 10,000		2.09			
10,0001 – 40,000		28.53			
40,001 – 120,000		39.67			
120,001 –		29.71			

Notes: All regression models in the article that do not include PES office fixed effects also include a control variable for in which region the PES office is located (the PES offices are organized in ten different geographical /administrative units).

Table A 3 Robustness checks

	A. Use AST		B. Consider recommendation from AST		C. Follow recommendation from AST	
	Ordered logit	Only caseworkers >2 years of exp.	Ordered logit	Only caseworkers >2 years of exp.	Ordered logit	Only caseworkers >2 years of exp.
Tenure	-0.029*** (0.008)	-0.004* (0.002)	-0.021*** (0.008)	-0.003 (0.002)	-0.015** (0.007)	-0.002 (0.002)
Pseudo/ Adjusted R ²	0.05	0.12	0.03	0.05	0.02	0.04
No. obs.	1,478	1,075	1,461	1,061	1,440	1,043

Notes: For each outcome, the first column reports ordered logit coefficients and the second LPM regression coefficients (robust standard errors within parentheses). The first column includes PES office control variables and caseworker background and attitudinal variables (see Table A 2). The second column includes PES office fixed effects and caseworker background and attitudinal variables (see Table A 2). The analyses in the second column exclude PES officers employed after the introduction of the AST. * = sig. at <0.10; ** = sig. at <0.05; *** = sig. at <0.01.

Publication series published by IFAU – latest issues

Rapporter/Reports

- 2015:1** Albrecht James, Peter Skogman Thoursie and Susan Vroman "Glastaket och föräldraförsäringen i Sverige"
- 2015:2** Persson Petra "Socialförsäkringar och äktenskapsbeslut"
- 2015:3** Frostenson Magnus "Organisatoriska åtgärder på skolnivå till följd av lärarlegitimationsreformen"
- 2015:4** Grönqvist Erik and Erik Lindqvist "Kan man lära sig ledarskap? Befälsutbildning under värnplikten och utfall på arbetsmarknaden"
- 2015:5** Böhlmark Anders, Helena Holmlund and Mikael Lindahl "Skolsegregation och skolval"
- 2015:6** Håkanson Christina, Erik Lindqvist and Jonas Vlachos "Sortering av arbetskraftens förmågor i Sverige 1986–2008"
- 2015:7** Wahlström Ninni and Daniel Sundberg "En teoribaserad utvärdering av läroplanen Lgr 11"
- 2015:8** Björvang Carl and Katarina Galic' "Kommunernas styrning av skolan – skolplaner under 20 år"
- 2015:9** Nybom Martin and Jan Stuhler "Att skatta intergenerationella inkomstsamband: en jämförelse av de vanligaste måtten"
- 2015:10** Eriksson Stefan and Karolina Stadin "Hur påverkar förändringar i produkt efterfrågan, arbetsutbud och lönekostnader antalet nyanställningar?"
- 2015:11** Grönqvist Hans, Caroline Hall, Jonas Vlachos and Olof Åslund "Utbildning och brottslighet – vad händer när man förlängde yrkesutbildningarna på gymnasiet?"
- 2015:12** Lind Patrik and Alexander Westerberg "Yrkeshögskolan – vilka söker, vem tar examen och hur går det sedan?"
- 2015:13** Mörk Eva, Anna Sjögren and Helena Svaleryd "Hellre rik och frisk – om familjebakgrund och barns hälsa"
- 2015:14** Eliason Marcus and Martin Nilsson "Inlåsnings effekter och differentierade ersättningsnivåer i sjukförsäkringen"
- 2015:15** Boye Katarina "Mer vab, lägre lön? Uttag av tillfällig föräldrapenning för vård av barn och lön bland svenska föräldrar"

Working papers

- 2015:1** Avdic Daniel "A matter of life and death? Hospital distance and quality of care: evidence from emergency hospital closures and myocardial infarctions"
- 2015:2** Eliason Marcus "Alcohol-related morbidity and mortality following involuntary job loss"
- 2015:3** Pingel Ronnie and Ingeborg Waernbaum "Correlation and efficiency of propensity score-based estimators for average causal effects"
- 2015:4** Albrecht James, Peter Skogman Thoursie and Susan Vroman "Parental leave and the glass ceiling in Sweden"
- 2015:5** Vikström Johan "Evaluation of sequences of treatments with application to active labor market policies"
- 2015:6** Persson Petra "Social insurance and the marriage market"
- 2015:7** Grönqvist Erik and Erik Lindqvist "The making of a manager: evidence from military officer training"
- 2015:8** Böhlmark Anders, Helena Holmlund and Mikael Lindahl "School choice and segregation: evidence from Sweden"

- 2015:9** Håkanson Christina, Erik Lindqvist and Jonas Vlachos “Firms and skills: the evolution of worker sorting”
- 2015:10** van den Berg Gerard J., Antoine Bozio and Mónica Costa Dias “Policy discontinuity and duration outcomes”
- 2015:11** Wahlström Ninni and Daniel Sundberg “Theory-based evaluation of the curriculum Lgr 11”
- 2015:12** Frölich Markus and Martin Huber “Direct and indirect treatment effects: causal chains and mediation analysis with instrumental variables”
- 2015:13** Nybom Martin and Jan Stuhler “Biases in standard measures of intergenerational income dependence”
- 2015:14** Eriksson Stefan and Karolina Stadin “What are the determinants of hiring? The role of demand and supply factors”
- 2015:15** Åslund Olof, Hans Grönqvist, Caroline Hall and Jonas Vlachos “Education and criminal behaviour: insights from an expansion of upper secondary school”
- 2015:16** van den Berg Gerard J. and Bas van der Klaauw “Structural empirical evaluation of job search monitoring”
- 2015:17** Nilsson Martin “Economic incentives and long-term sickness absence: the indirect effect of replacement rates on absence behavior”
- 2015:18** Boye Katarina “Care more, earn less? The association between care leave for sick children and wage among Swedish parents”
- 2015:19** Assadi Anahita and Martin Lundin “Tenure and street level bureaucrats: how assessment tools are used at the frontline of the public sector”

Dissertation series

- 2014:1** Avdic Daniel “Microeconomic analyses of individual behaviour in public welfare systems”
- 2014:2** Karimi Arizo “Impacts of policies, peers and parenthood on labor market outcomes”
- 2014:3** Eliasson Tove “Empirical essays on wage setting and immigrant labor market opportunities”
- 2014:4** Nilsson Martin “Essays on health shocks and social insurance”
- 2014:5** Pingel Ronnie “Some aspects of propensity score-based estimators for causal inference”
- 2014:6** Karbownik Krzysztof “Essays in education and family economics”