ERC Starting Grant 2018

Action Acronym: POAB
Action number: 802244
Action Title: The Psychology of Administrative Burden
Principal Investigator: Martin Bækgaard
Host Institution: Aarhus University

Section A: State-of-the-art and objectives

Importance of the research topic

Citizens' experiences of administrative burdens in their encounters with the state are associated with important societal and human consequences. Stress (Moynihan, Herd & Harvey 2015), stigmatization (Moffit 1983; Manchester & Mumford 2010), and reduced take-up of welfare benefits for which citizens are eligible (Bhargava & Manoli 2015; Currie & Grogger 2001; Hernanz et al. 2004; Shafir 2014) are among the detrimental effects of administrative burdens that may further deteriorate citizens' health, their labor market prticipation, and civic participation (Baicker et al. 2013; Bruch, Ferree & Soss 2010; Currie & Gruber 1996; Goodman-Bacon 2016; Heinrich 2016; Kling et al. 2004). If burdens prevent citizens from gaining access to vital services, the success of those programs is also diminished. In light of the importance of administrative burdens, it is surprising how little we know about the conditions that give rise to experiences of administrative burden. How do rules and regulations in citizen-state interactions shape administrative burden? And do rules cause stronger experiences of burden for some people than for others?

Several literatures deal with administrative burden and related aspects, including studies on red tape, street-level bureaucracy, policy feedback, and program take-up (Moynihan et al. 2015; 2016). The study of administrative burden has recently even become a field of research in its own right within public administration, as several studies attempt to conceptualize and understand how and with what consequences such burdens are imposed on citizens (e.g., Burden et al. 2012; Heinrich 2016; Heinrich & Brill 2015; Herd 2015; Herd et al. 2013; Moynihan et al. 2015; 2016; Sheely 2013). However, the literature has three shortcomings. First, it suggests that administrative rules concerning welfare benefits impose learning, compliance, and psychological burdens on eligible individuals (Moynihan et al. 2015), but little is known about individual citizens' experiences of administrative burden. It remains to be explored why and for whom administrative rules are burdensome, and solid measures of the concept remain to be developed. Second, the literature is overwhelmingly based on studies of how take-up of welfare benefits varies with administrative rules (e.g., Aizer 2003; 2007; Bansak & Raphael 2006; Ebenstein & Stange 2010; Van Oorschot 1998) and how participation in welfare benefit programs affects political participation (Bruch, Ferree & Soss 2010; Mettler 2002). However, evidence is scarce concerning how administrative rules affect experiences of burden on the individual level. Third, the literature on the impact of administrative rules generally draws on rational approaches (Bhargava & Manoli 2015; Shafir 2014); rules are evaluated based on costs or benefits. However, behavioral economics and cognitive psychology demonstrate that cognitive limitations in many instances reduce or even eliminate the importance of costs and benefits in individual preference formation and decision-making (Tversky & Kahneman 1981).

Building on this insight, the POAB project proposes three cognitive factors moderating the impact of administrative rules among welfare recipients: (1) Economic resource scarcity because it impedes cognitive function (Mani et al. 2013; Vohs 2013) and hence reduces the ability to cope with administrative rules. For example, people under financial stress will tend to be less likely to make forward-looking decisions, such as managing their way through onerous paperwork. (2) Self-efficacy (Bandura 1977; 1993; 2009) because more efficacious individuals tend to invest more effort and confidence in dealing with complex tasks and hence will feel more able to cope with administrative rules. This implies that some groups will experience administrative rules as being more burdensome than others. (3) Perceptions of being deserving recipients of welfare benefits (e.g., Gilens 2000; Petersen 2012; Van Oorschot 2000; 2006) because low degrees of deservingness in combination with demanding requirements are likely to increase perceived stigma and stress in relation to applying for the benefits.

Research question

To take the understanding of administrative burden to a completely new level, the POAB project asks: *How do administrative rules concerning welfare benefits affect experiences of administrative burden? To what extent does the impact of administrative rules depend on economic resource scarcity, self-efficacy, and deservingness?* In line with literature on red tape (Bozeman 1993; 2000; Bozeman & Feeney 2011; Moynihan & Herd 2010; Tummers et al. 2016), the project focuses on variation in the presence of rules that are either more complex or require more information or action of the benefit recipient than needed to "advance the legitimate purposes the rules were intended to serve" (Bozeman 2000: 12).

The project will break fundamentally new ground by combining and extending theory on administrative burden in public administration research with theories in political science, psychology, and behavioral economics. In doing so, POAB will provide a new theoretical understanding of administrative burdens and about citizen-state interactions more generally. Furthermore, it will provide robust, causal knowledge on how, why, and for whom rules and regulations in citizen-state interactions create experiences of administrative burden by means of rigorous experimental designs and novel register, physiological, and survey data on experiences of administrative burdens.

State-of-the-art: What do we know about administrative burden?

Drawing on Burden et al. (2012) and Moynihan et al. (2015), the project defines administrative burdens as an individual's experience of policy implementation as onerous. This definition centers burdens on individual experiences, which is important because it distinguishes formal rules from their effects and in so doing makes the topic appropriate for explaining variation across individual experience.

The literature distinguishes between three broad categories of burdens associated with administrative rules and regulations in citizen-state encounters (Moynihan et al. 2015; 2016): **(1) burdens related to the costs of learning about the existence and eligibility criteria of welfare programs** (Chetty et al. 2009; Chetty & Saez 2013; Heckman & Smith 2003; Karlan et al. 2015; Kling et al. 2012); **(2) compliance or transaction burdens** involved in citizen-state interactions (Bertrand et al. 2006; Hanratty 2006). Surveys show that many citizens who are eligible for welfare benefits find that it is complicated to apply for them (Bartlett et al. 2004). Similarly, natural experiments show that increases in requirements reduce program participation among eligible individuals (Brien & Swann 1999; Wolfe & Scrivner 2005), and that greater ease of compliance with program requirements increases take-up rates (Kopczuk & Pop-Eleches 2007; Schwabish 2012); **(3) psychological burdens** in the form of stigma (Pescosolido & Martin 2015) from participating in unpopular programs (Currie 2006; Hansen et al. 2014; Moffit 1983; Stuber & Schlesinger 2006), disempowerment (Dias & Maynard-Moody 2007), feelings of subservience and loss of autonomy (Lipsky 1980; Soss 1999b), and stress (Moynihan et al. 2015), which can be further reinforced by administrative requirements like fingerprints (Bartlett et al. 2004) and irrelevant information (Brodkin 1992; Soss 1999b). Prior research has focused on documenting psychological burdens (Dias & Maynard-Moody 2007; Lipsky 1980; Soss 1999b) or on the impacts of reducing such burdens (Bhargava & Manoli 2015; Bruch et al. 2010; Rattcliffe et al. 2007; Schanzenbach 2009).

However, in contrast to the research on learning and compliance burdens, little systematic evidence exists on the impact of administrative rules on psychological burdens. Yet there is ample reason to expect such an impact. Evidence from behavioral economics suggests that individuals are less likely to "exhibit forward-looking behaviors when we are threatened, challenged, and depleted" (Mullainathan & Shafir 2013: 282). Moreover, administrative rules and practices that are considered by benefit recipients to be redundant barriers that do not advance legitimate purposes may very well be perceived as stigmatizing (e.g., Brodkin 1992; Moynihan et al. 2014: 59; Soss 1999b). Further, studies of policy feedback suggest that the design of welfare programs affects the extent to which individuals participate politically by reducing, amongst other things, their faith in government responsiveness (Soss 1999a) and trust in government (Kumlin & Rothstein

2005). Yet little is known about how and for whom administrative rules translate into psychological administrative burdens.

While mentioning there is strong evidence on learning and compliance costs that generate burdens, Moynihan et al. (2014) note that much of the research on psychological costs is qualitative, or reliant on cross-sectional surveys, and call for more research using causal designs. I respond to this call, addressing how psychological factors make rules more or less burdensome for some groups over others. While the literature acknowledges that rules can be psychologically taxing, it offers little insight into how specific cognitive biases are triggered that lead to worse citizen outcomes. I address this problem by focusing on how administrative rules in combination with resource scarcity, self-efficacy, and deservingness perceptions of benefit recipients might influence administrative burden. With its focus on the psychological aspects of having to cope with complex administrative rules, this project examines the psychological burdens related to rules, while the costs of learning about and complying with program rules are outside the scope of the project.

One branch of the literature focuses on differences in take-up between eligible individuals with different resources. Some studies show that take-up is higher among needier individuals, which may be taken as evidence of effective ordeal mechanisms (Alatas et al. 2015; Besley & Coate 1992) where the burdens of complying effectively screen out individuals with less need and hence improve targeting. Other studies find that take-up rates are lower among the more needy and less well educated (Brodkin & Majmundar 2010; Hansen & Hultin 1997; Orbach 2006; Sommers et al. 2012), which may suggest that administrative burden is felt more heavily among people with less human capital (Bhargava & Manoli 2015; Kuye et al. 2013; Super 2004). Whether and why this is so, however, remains to be studied.

Theoretical propositions

Building on research on psychological administrative burdens, the project expects that additional formal requirements will increase the discomfort and stress associated with applying for benefits (Bartlett et al. 2004; Brodkin 1992; Soss 1999b). This leads to the first hypothesis of the project which suggests a direct causal impact of complex rules and requirements on psychological administrative burden. *H1: Red tape in welfare benefit programs increases administrative burden.* This is particularly true for people in greater need because of their greater dependence on the benefits. Based on studies in cognitive psychology and behavioral economics, the project moreover identifies three mechanisms that are likely to cause differential effects of such requirements among welfare benefit recipients. In doing so, POAB offers fundamental new answers to the questions of how and why citizens differ in their experiences of administrative burden.

<u>Economic resource scarcity:</u>

First, drawing on insights from research using cognitive approaches to the study of resource scarcity (Mullainathan & Shafir 2013; Shah et al. 2012; 2015), the project argues that economic hardship in itself imposes load and impedes the capacity to deal with administrative rules and hence causes administrative burdens. **Resource scarcity** has been shown to causally reduce problem-solving capabilities and deplete behavioral control in a series of experiments. When economic resources are scarce, budgetary constraints preoccupy a share of cognitive capacity and leave less room for making important decisions in other domains because people are focusing on making ends meet (Mani et al. 2013; Mullainathan & Shafir 2013; Shafir 2014; Spears 2011). Thus, relatively poor people score as much as 13 IQ points lower on average in intelligence tests when asked to contemplate high hypothetical costs compared to low hypothetical costs. Likewise, Indian farmers perform considerably worse when surveyed right before compared to right after harvest (Mullainathan & Shafir 2013).

Dealing with complex administrative rules also requires cognitive capacity (Kuye et al. 2013). Building on the cognitive literature on resource scarcity, the project therefore expects a reduction in the ability to deal with complex administrative rules for people who are preoccupied with concerns about scarce economic resources. Thus, resource scarcity is expected to moderate the impact of complex rules and additional requirements. *H2: The scarcer the resources, the stronger the impact of rules in welfare benefit programs on administrative burden.* Because resource scarcity reduces cognitive capacity, Hypothesis 2 furthermore expects that it reduces the feeling of being able to cope with administrative rules (Orbach 2006), and as a consequence increases administrative burden. Therefore, resource scarcity is expected to have a direct effect on administrative burden. *H3: Resource scarcity increases administrative burden.*

Perceived self-efficacy:

Second, the social cognitive theory of human agency (Bandura 1977; 2001) points to the importance of self-efficacy to human choices. Distinct from actual ability to deal with obstacles and problems, **perceived self-efficacy** can be defined as people's evaluation of their own "capacity for success and agency in a specific task or domain" (Condon & Holleque 2013). Indeed, across a range of domains, perceived self-efficacy has been shown to be important to the cognitive effort that people assign to dealing with problems at hand, to making decisions, and to how long they persevere in the face of difficulties and setbacks (Bandura 1993; Locke & Latham 1990). Thus, when faced with obstacles and setbacks, those who doubt their own capabilities "slacken their efforts, give up prematurely, or settle for poorer solutions," whereas those who have stronger beliefs in their own capabilities increase their effort to overcome the challenges (Bandura 2009: 179). For instance, positive effects of perceived self-efficacy have been identified in relation to coping with burdensome personal events. Thus, Romero-Moreno et al. (2011) provide evidence that high perceived self-efficacy reduces the impact of burden on depression in caregiver relations. In the context of unemployment, Carlier et al. (2014) find that self-efficacy has a positive impact on job searches among the unemployed. Likewise, in a cohort study of unemployed Germans, Zenger et al. (2013) find that people with low levels of perceived self-efficacy experience greater physical and mental health complaints and stay in unemployment for twice as long a period as those who are more efficacious.

Based on these insights, the project assumes that domain-specific perceived self-efficacy will increase the ability of benefit recipients to cope with additional administrative rules and requirements. In the context of public service provision, public service efficacy (the extent to which people consider themselves capable of mastering interactions with the government) has been suggested as a particularly promising domain-specific measure of perceived self-efficacy for addressing equity concerns in public service provision (Kristensen et al. 2012). *H4: The higher an individual's public service efficacy, the lesser the impact of rules in welfare benefit programs on administrative burden.* Furthermore, building on the finding that perceived self-efficacy impacts cognitive effort in dealing with tasks (Bandura 1993), the project assumes a similar impact of public service efficacy on cognitive effort in dealing with administrative rules and hence that public service efficacy increases the ability to cope with administrative rules. *H5: Public service efficacy reduces administrative burden.* Finally, self-efficacy theory (Bandura 1977; 1997) points to mastery experiences as a main source of self-efficacy. Mastery experiences are important because they send a strong signal to individuals about actual ability to deal with administrative rules and requirements. Thus, when facing particularly complex rules, individuals are more likely to be taught that they are not able to deal with the problems at hand. Consequently, the project proposes an impact of rules on administrative burden which is partly mediated by public service efficacy. *H6: Red tape in welfare benefit programs reduces public service efficacy.*

Deservingness perceptions:

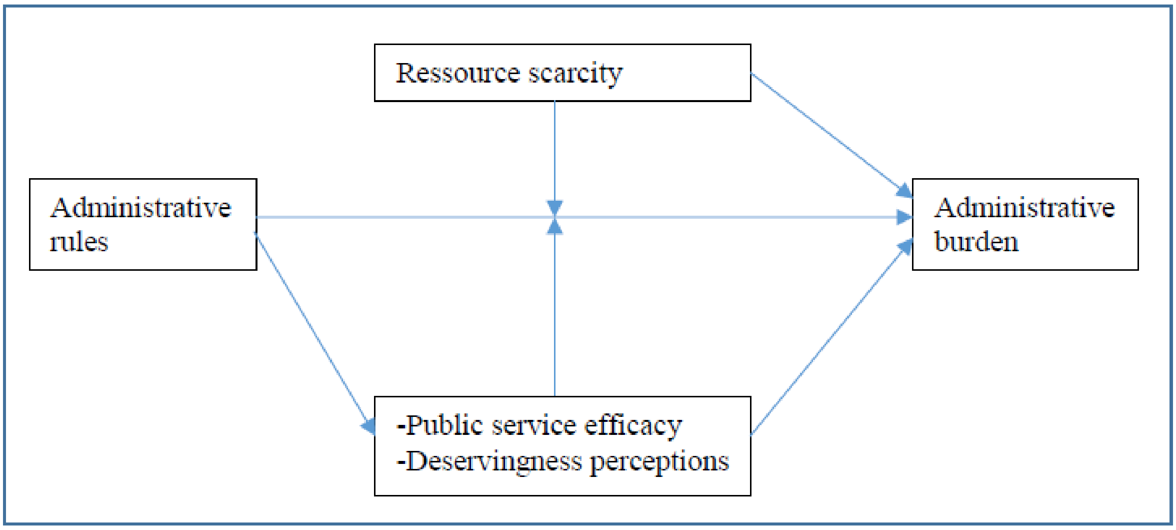
Third, research points to the importance of whether recipients of welfare benefits are considered deserving or not (e.g., Gilens 2000; Petersen 2012). If the public considers recipients to be deserving, benefits are supported. On the other hand, if recipients are considered undeserving, benefits are rejected. Across countries and different forms of benefits, extant research has found evidence of huge differences in public **perceptions of deservingness** (e.g., Van Oorschot 2000; 2006). Perceptions of deservingness rely on a number of different cues (Van Oorschott 2000). Most importantly, individuals attune to whether benefit recipients are in control of their own circumstances and the extent to which they demonstrate a willingness to contribute to society. If a group of benefit recipients is perceived as being able to better their circumstances but still requests help, it signals that they are avoiding effort and they will thus be considered less deserving (Campbell 2007: 130; Petersen et al. 2010: 27).

Building on the concept of identity-driven stigma (Bhargava & Manoli 2015: 3502), the project assumes that benefit recipients will internalize existing negative beliefs and stereotypes that others hold towards them as a group. Thus, the project expects that benefit recipients will feel stigmatized in response to perceptions of low deservingness in the public at large (Campbell 2007; Currie 2006; Horan & Austin 1974; Mettler 2011) and that the impact of public deservingness perceptions will be further exacerbated when combined with a high degree of red tape in welfare benefit programs. This is because rules are associated with interpretive effects on citizens in the sense that through rules they acquire perceptions of their role in society and their status and deservingness in relation to other citizens and government (Mettler 2002: 352). Hence, red tape increases the signal that recipients are not deserving. Conversely, a high degree of publicly perceived deservingness may help reduce the impact of red tape on administrative burden. *H7: The more welfare benefit recipients are considered deserving by the public, the lesser the impact of rules in welfare benefit programs on administrative burden.* Additionally, deservingness perceptions are expected to have direct impacts on administrative burden as well. *H8: Perceptions of deservingness reduce administrative burden.* Furthermore, consistent with the arguments that red tape in welfare benefit programs signals low deservingness and that benefit recipients will tend to internalize such beliefs, the project expects harmful effects of rule complexity and rule redundancy on deservingness perceptions and thus that the impact of red tape on administrative burden is partly mediated by deservingness perceptions. *H9: Red tape in welfare benefit programs reduces perceptions of deservingness*.

For all seven hypotheses in which administrative burden appears as the dependent variable (H1-H5 and H7-H8), burdens are expected to show up as perceived burdens, inability to cope with program rules, and stress reactions caused by the perceived burdens. In relation to H7-H8, they are furthermore expected to manifest as perceptions of stigma. Figure 1 shows the theoretical propositions of the project.

The figure does not aim to cover all plausible relationships between the variables included since the main interest of the project is in how administrative rules differentially translate into burdens. Indeed, feedback effects from the right-hand side to the left-hand side of the figure are likely, but outside the scope of the project. For instance, administrative burdens in the form of emotional arousal and stress reactions may have detrimental effects on public service efficacy (Bandura 1977: 198f) and deservingness perceptions, and may deteriorate the financial situation of individuals by reducing welfare take-up (Bhargava & Manoli 2015).

Figure 1: Illustration of key propositions



Section B: Methodology

Case selection: Unemployment benefits

The empirical examination focuses on a type of rules that are particularly salient to citizens: rules tied to unemployment benefits. Welfare benefits targeted at unemployed individuals are an example of benefits that are critically important to people's lives since in most cases the benefit constitutes the main, if not the only, source of income for recipients. Access to unemployment benefits is tightly regulated in most countries and requires considerable effort on the part of the unemployed. In combination with people being economically dependent on the benefits, this makes rules in this area appear particularly burdensome compared to less salient or economically crucial benefits. The project thus relies on a case which is likely to have great practical implications for citizens affected by the rules.

In addition to being an excellent case from a practical perspective, the case is also desirable from a research design perspective: In order to study how resource scarcity, deservingness perceptions, and public service efficacy interact with administrative rules in shaping administrative burden, I need a case with variation in the key independent variables (either across time or between jurisdictions), or where they can reasonably be manipulated using experimental methods without introducing unrealistic scenarios of, for instance, differences in actual rules. As I will demonstrate below, these preconditions are indeed fulfilled in the unemployment case.

Work packages

The hypotheses will be addressed in three broad work packages, enabling the research team to conduct a series of experimental and observational analyses using physiological, register-, and survey-based measures of administrative burden. In order to deal with the challenges caused by two-way causality, the project relies whenever possible on experimental methods to get at the causal impact of the variables on the left-hand side of Figure 1 on administrative burden. Hence, each empirical study focuses on selected aspects of Figure 1, and no studies cover the full model. However, in combination, the work packages offer a comprehensive test of the causal model proposed in Figure 1 by using different operationalizations of the central concepts (rules, resource scarcity, deservingness perceptions, and public service efficacy), by conducting studies prioritizing exogenous variation of concepts, and by using rich register data to establish real-world relevance and address concerns about ecological and external validity. In combination, the work packages will contribute with a new, validated survey scale to measure administrative burden, unprecedented measurement validity of key concepts, and groundbreaking empirically validated knowledge about how, why, and for whom rules and requirements translate into experiences of burden.

Table 1 describes the objectives and designs of all empirical studies conducted.

Table 1. Objectives and operationalizations of work packages.

	Objective:	Empirical design:	Operationalization of administrative burden:
WP 1	1) Establish combined causal effect of rules and resource scarcity (H1, H2, H3, H6, H9)	Cross-national laboratory experiment exploiting natural variation in resources before/after benefits have been paid and rules by a vignette manipulation (200 participants from each country)	Physiological measures + survey measures
WP 1	2) Establish combined causal effect of rules and public service efficacy (H1, H4, H5, H9)	Cross-national laboratory in which efficacy is manipulated by random assignment to hard or easy test and rules by a vignette manipulation (200 participants from each country)	Physiological measures + survey measures
WP 1	3) Establish combined causal effect of rules and public service efficacy and deservingness (H1, H6, H7, H8)	Cross-national laboratory in which deservingness is manipulated by random assignment to newspaper articles and rules by a vignette manipulation (200 participants from each country)	Physiological measures + survey measures
WP 1	4) Understand mechanisms	Qualitative study using 120 in-depth interviews (60 from each of two countries)	Experiences with administrative burden and administrative rules
WP 2	5) Establish external validity + alternative manipulation of key variables (H1, H2, H3, H6, H9)	Cross-national survey experiments (nine countries) with manipulations of rules(similar to Work Package 1) and primes (to manipulate resource scarcity)	Survey-based
WP 2	6) Establish external validity + alternative manipulation of key variables (H1, H4, H5, H9)	Cross-national survey experiments (nine countries) with manipulations of rules (similar to Work Package 1) and frames (to manipulate efficacy)	Survey-based
WP 2	7) Establish external validity + alternative manipulation of key variables (H1, H6, H7, H8)	Cross-national survey experiments (nine countries) with manipulations of rules (similar to Work Package 1) and frames (to manipulate deservingness)	Survey-based

WP 3a	8) Study impact of rules on burden in real-world setting (H1-H5)	Quasi-experiment using actual changes in requirements	Register-based: stress diagnoses and prescriptions of stress-reducing medication; electoral participation
WP 3b	9) Study impact of rules on burden in real-world setting while also establishing causal effects of such changes (H1-H5)	Field experiment with manipulation of requirements/administrative rules	Register-based: stress diagnoses and prescriptions of stress-reducing medication
WP 3c	10) Study impact of deservingness on burden in real-world setting (H8)	Quasi-experiment using two actual changes in deservingness	Register-based: stress diagnoses and prescriptions of stress-reducing medication

Below, the designs, measures, and analyses for each of the work packages will be discussed.

Work Package 1: Laboratory experiments and qualitative research in Denmark and Hong Kong

Work Package 1 focuses on how variation in administrative rules affects administrative burden and on the extent to which this relationship is moderated by resource scarcity (H2), public service efficacy (H4), and deservingness perceptions (H7). Establishing causal effects of administrative rules moderated by resource scarcity, public service efficacy, and deservingness perceptions is methodologically challenging because of reverse causality: Experiences of administrative burden may influence the moderators. To address this challenge, the project conducts three laboratory experiments (Blom-Hansen et al. 2015), each focusing on one of the moderators. The experiments will be conducted among Danish recipients of unemployment benefits. The Danish system distinguishes between two main categories of benefits targeted at unemployed individuals. Unemployed individuals who have been members of an unemployment insurance fund ("*A-kasse*") and who fulfill certain additional requirements are entitled to unemployment benefits for two years. The considerably stricter rules on social security benefits then apply if they have not found a job in the meantime (BEK no. 128 2017). Furthermore, in recent years the deservingness of social security recipients in particular has been heavily debated. Thus, the focus on unemployed individuals offers a case where we would expect administrative burden to appear to a greater extent as compared to less heavily regulated benefits and benefits where recipients are considered more deserving by the public.

In all experiments, respondents will engage in a task completion exercise (e.g., Scott & Pandey 2000; Tummers et al. 2016). Two versions of a fictitious application form for social security benefits will be created for the study to experimentally vary the degree of red tape imposed on the subjects by means of random assignment: one with highly complex and another with simpler rules. The first experiment examines the moderating impact of resource scarcity. To this end, it uses a laboratory experiment nested in a natural experiment using random assignment to resource scarcity in addition to the random assignment to rule complexity described above. The experiment exploits the fact that welfare benefits are paid to all recipients on the same date each month to create exogenous variation in the subjects' economic resources in the period from right before to right after benefits have been paid out. Thus, in order to manipulate resource scarcity, subjects in the experiment are randomly assigned to participate in the study either three days before or three days after they receive unemployment benefits.

The second experiment focuses on the moderating impact of public service efficacy. Inspired by previous studies which have shown how various forms of self-efficacy can be manipulated experimentally by means of framed feedback on tests (Bandura 1977; 1993; Bouffard-Bouchard 1990; Jourden 1993; Petersen et al. 2017), I will experimentally manipulate public service efficacy by focusing on differences in feedback. However, to address ethical concerns about deceiving subjects to make the feedback from the test credible, I will not manipulate the feedback directly but rather the difficulty of the test. Thus, respondents will be randomly assigned to one of two different versions of knowledge tests about Danish rules on unemployment and social security benefits. One test will be a relatively easy version that has an average of 75 percent correct responses in pilot tests, and the other will be a relatively difficult version with an average of 25 percent correct responses. Following the test, respondents will be told how successful they were in absolute terms and will then be asked to fill out a questionnaire aimed at tapping their public service efficacy in order to check the impact of the manipulation on public service efficacy. This will be followed by the task completion exercise.

The third experiment is concerned with the moderating impact of deservingness perceptions. In order to manipulate deservingness, I draw on a framing study in which I make use of real-world discussions in news media of the deservingness of recipients of unemployment benefits. Prior to the task completion exercise, respondents will be randomly assigned to either a high deservingness condition or a low deservingness condition. Respondents in the high deservingness condition will be presented with two short newspaper articles emphasizing solidarity with poor people and social justice. Respondents in the low deservingness treatment will be presented with two short newspaper articles describing frustration with benefit recipients who are characterized as being lazy and selective in relation to getting a job and whose combined income from welfare benefits exceeds that of many low-income people. After reading the newspaper articles, the respondents will be asked about the extent to which they consider the described benefit recipients to be deserving of social security benefits, offering a manipulation check. This will be followed by the task completion exercise.

Thus, all three laboratory experiments use 2 x 2 between-subjects designs, where the hypotheses about moderated effects of administrative rules will be tested by means of interaction terms between the administrative rules treatment and the moderator treatments. In all three experiments, administrative burden will be measured by self-reported perceptions of burden (in a post-test questionnaire) and physiological stress responses as indexed by rises in cortisol levels (e.g. Hofer et al. 1972), alpha amylase in saliva (Cozma et al. 2017; Nater et al. 2006), and blood pressure as well as changes in heart rate (HR) and heart rate variability (HRV) (French et al. 2014; Neiman et al. 2015; Taelman et al. 2008). Past research supports that when a stressor activates the autonomic nervous system, cortisol levels and blood pressure rise and HR and HRV change (e.g., Taelman et al. 2008). Likewise, stressor activation of the sympathetic adrenomedullary system causes increases of alpha amylase in saliva (Cozma et al. 2006). Hence, within-individual changes in these physiological indicators (thereby reducing individual-level noise) provide valid non-self reported measures of administrative burden. Change in cortisol levels and alpha amylase will be measured through saliva samples collected before the treatment and after the task completion exercise. Blood pressure, HR and HRV will be measured continuously before, during, and after stimulus presentation using the BioPac system at the COBE lab. The use of such physiological indicators alongside survey indicators provides an important opportunity to assess how well the two correlate with one another; if they correlate highly it will offer strong evidence that less costly and intrusive self-reported indicators have validity in capturing physiological stressors. In addition to measures of self-reported perceptions of burden, the post-test questionnaire following all three experiments will also contain questions on perceptions of resource scarcity, deservingness perceptions, and public service efficacy. These questions serve a dual purpose: First, they can be used as manipulation checks of the three moderators. Second, they can be used as dependent variables in the analyses of how rules affect public service efficacy (H6) and deservingness perceptions (H9).

The laboratory experiments will take place at the Cognition and Behavior Lab (COBE) at Aarhus University. Compared to other experimental designs, laboratory experiments have a high correspondence between the respondents who are selected for treatment (intention to treat) and those who actually receive the treatment. Thus, a high degree of researcher control over whether respondents actually receive the treatment helps reduce random error. Related lab experiments rely on small samples (Mani et al. 2013: N=101; Scott & Pandey 2000: N=96; Tummers et al. 2016: N=179). However, effects sizes in these studies are very high. Assuming a moderate effect size of 0.5 (power = 0.8; alpha = 0.05), each laboratory experiment will use a sample consisting of 200 individuals. In all experiments, subjects will be selected from among current recipients of unemployment benefits. Subjects will be recruited through Statistics Denmark, thus giving access to information on participants' household resources, educational level, experiences with receiving welfare benefits, and other register-based information that can be used to establish baseline equivalence and to reduce sample size requirements by including them as controls in statistical models.

Furthermore, in order to address concerns about external validity and concerns that many social science experiments do not replicate (Aarts et al. 2015), the laboratory experiments will be replicated among a similar number of unemployment benefit recipients in a very different welfare system at the Psychophysiology Lab in Hong Kong, China in collaboration with associate professors Julian Lai Chuk Ling and Yun Wah Lam. Importantly, this lab has extensive experience with studying physiological manifestations of stress. This will be a direct replication (Jilke et al. 2017) in the sense that experimental procedures, manipulations, and outcome measures will be similar to those in the Danish experiments. To ensure that possible differences in findings between the Danish and Chinese results cannot be ascribed to differences in equipment, I will rely on similar equipment (for instance by bringing Danish equipment to

Hong Kong) and analysis settings across the two countries. Finally, 20 subjects from each of the three laboratory experiments (and in each of the two countries) will be randomly selected for additional in-depth qualitative interviews about their experiences with being benefit recipients and their experience with the administrative rules tied to the benefit programs. The interviews serve as a complement to the statistical analysis by providing additional information on why and under what conditions benefit recipients experience administrative rules as being burdensome.

Work Package 2: Survey experiments in nine countries

The laboratory experiments in Work Package 1 will be supplemented by survey experiments which will make three important additions to the project at large. First, the work package will expand the concept of rules covered in Work Package 1 by focusing on three different aspects of rules in a manipulated vignette study (e.g., Schram et al. 2009). Second, it will improve causal traction by means of alternative manipulations of resource scarcity, public service efficacy, and deservingness. Third, it bolsters external validity by studying the extent to which results generalize to other settings and welfare benefits. All survey experiments will use manipulated vignette experiments in which respondents are presented with a description of an existing welfare benefit program. For ethical reasons, I will explicitly mention that the description is a short version of actual program rules in which emphasis is placed on certain aspects. I induce variation in rules by emphasizing three different aspects of the rules in the descriptions. I randomize the extent to which emphasis is put on rules being universal or targeted, rule complexity, and the extent to which citizens will have to fulfill requirements to live up to the rules. This will allow us to use a regression approach to estimate the causal impact of the three aspects of rules on administrative burden. Furthermore, all survey experiments will contain a manipulation of one of the three moderators. H2, H4, and H7 about moderated effects of administrative rules are then tested by interacting each of the three moderators with rule aspects.

Inspired by studies that have been successful in priming resource scarcity (Krosch & Amodio 2014; Mani et al. 2013; Shah et al. 2012; 2015), respondents in the first survey experiment will furthermore be randomly assigned to receive a text asking them to contemplate either a high- or a low-cost operation at the dentist. In addition to the rules vignette, the second survey experiment uses a framing approach to manipulate public service efficacy. Thus, respondents will be randomly assigned to either a piece of text emphasizing the challenges concerned with applying for social security benefits or a piece of text emphasizing the ease with which people can navigate the social security system. In order to avoid deceiving respondents, both frames will be based on real information and thus will simply emphasize different aspects of the application procedure. In the third survey experiment, respondents in addition to the rules vignette will be randomly assigned to either a high or a low deservingness condition. Respondents in the high deservingness condition will be presented with a piece of text in which social security benefits are described as an important part of the Danish welfare state targeted at people in need. Conversely, respondents in the low deservingness treatment will be presented with a piece of text emphasizing that social security benefits are mainly intended to be a temporary benefit designed to bring people back into employment as quickly as possible. The latter treatment will also emphasize public concerns about fraud in relation to social security benefits.

In all survey experiments, administrative burden will be measured by self-reported measures of administrative burden, ability to cope with the rules concerning the vignette they receive, and perceived stigma in relation to the vignette. Furthermore, to test whether burden perceptions are underreported due to self-serving bias, all surveys will contain an additional list experiment at the end (Glynn 2013; Kuklinski et al. 1997) in which respondents will be randomly assigned to either a control or an intervention group. Respondents in the control group will be presented with a list of statements about various non-burden perceptions of the administrative rules in the vignette. Respondents in the intervention group will be given the same list of items as well as an additional one about the administrative rule being burdensome. The difference between the two groups in the mean number of items that respondents agree with will indicate the share of people considering the rules burdensome. In addition to the experimental questions, the surveys will contain questions about perceptions of resource scarcity, deservingness perceptions, and public service efficacy like in Work Package 1. Questions about important background confounders such as income, education, race, and experiences with applying for public welfare benefits will also be included to improve the precision of estimates in the statistical analysis.

In order to examine whether the findings travel to other settings and benefits, similar experiments will be conducted in eight other countries: Belgium, Bulgaria, China, Germany, Italy, Poland, Spain, and the United States. These countries have been chosen based on a most different systems logic: I expect to see similar patterns in different countries regardless of the welfare model in place. Thus, to put my theory to a hard test, I compare the Danish social democratic welfare state model with the northern conservative/corporatist model of Germany and Belgium, the southern conservative/corporatist model of Italy and Spain, the liberal model of the US (Esping-Andersen 1990), the post-communist European model of Bulgaria and Poland (Fenger 2007), and the welfare for work model in Hong Kong (Bardoloi 2016; Schuman 2014). The country selection also offers a good mix in terms of geographic location and socio-economic conditions, with seven countries located all around Europe and two very distinct welfare systems outside Europe. A main purpose of conducting the experiments in several contexts is conceptual replication (Jilke et al. 2017; Schmidt 2009): In all countries, respondents will be presented with experimental descriptions of rules on highly salient and important benefits to recipients. Thus, for instance, the vignette in the US case will describe two hypothetical sets of rules about how to apply for Medicaid, the Italian vignette will focus on unemployment benefits (*indennita di disoccupazione*), and the Bulgarian vignette will focus on social benefits.

In all countries, the surveys will be organized online among members of large survey company panels such as local YouGov or YouGov partner panels. Contracts with survey companies will be made based on competitive tenders. Since resource scarcity and public service efficacy are expected to generally impact burden experiences regardless of whether respondents are benefit recipients or not, the first two experiments will use samples that are representative of the population at large in terms of gender, age, education, and geographical residence. In contrast, the theoretical proposition about the impact of deservingness perceptions is based on the assumption that it is only those who are affected by the rules who will internalize such perceptions. Therefore, the sample in the deservingness perceptions experiment will consist only of former or current recipients of the benefits described in the rules. For obvious reasons, this sample will not be representative of the population at large. Instead, the sampling procedure will prioritize maximizing variation in background characteristics (gender, age education, geographical residence). Survey experimental treatments are likely to be subject to more noise than comparable laboratory experiments because of, for instance, less respondent attention to the survey questions. Hence, a larger sample than in the laboratory experiments (1,000 responses) will be gathered in each of the three survey experiments and from each country, amounting to 27,000 responses in total.

Work Package 3: Individual level register data-based approaches

Though Work Packages 1 and 2 will provide novel and important insights on why people experience administrative rules as burdensome, they do not uncover experiences of burden in a real-world setting. To this end, Work Package 3 draws on rich and unique individual-level register data on Danish welfare benefit recipients (including data on sensitive issues such as health situation and socio-economic conditions) in combination with quasi- and field experimental-induced variation in rules (Work Packages 3a and 3b) and deservingness (Work Package 3c). Though anonymized, data can be linked due to unique individual level identifiers. Thus, this work package prioritizes realism and ecological validity over internal validity since none of the moderating variables can be experimentally manipulated in this design.

<u>Work Package 3a: Quasi-experimental study of the impact of rule changes</u>

Work Package 3a uses register-based data on a change in requirements concerning Danish unemployment benefits. From January 2008, recipients of unemployment benefits had to verify each week that they were actively looking for a job (BEK no. 179 2007; BEK no. 1083 2007). This change can be characterized as red tape from the viewpoint of recipients, since the verification in itself does not help the unemployed get a job. In line with some of the main hypotheses of the project, Work Package 3a suggests that the change in requirements increased the administrative burden and that this effect was more pronounced among individuals with scarce economic resources and individuals with lower levels of public service efficacy.

To study these hypotheses, the work package will draw on rich register data on Danish recipients of unemployment benefits in the period from January 1st 2007-December 31st 2008 (in July 2009, new rules on unemployment benefits went into effect [BEK no. 743 2009]. However, the period was further demarcated to ensure that exactly one year is covered before and after the treatment to account for seasonal impacts on depression and stress). Thus, administrative rules will be measured by including a dummy variable distinguishing between before and after the additional requirement was introduced in January 2008. Administrative burden will be measured by individual-level data on prescriptions of stress-reducing medication and diagnoses drawn from Danish health registers, which record each time a patient is in contact with the health care system (see www.esundhed.dk). Since income at the individual level only varies slightly among recipients of unemployment benefits, resource scarcity will be measured in two ways: income among other members of the household and household capital. Furthermore, in line with research finding significantly positive correlations between level of education and public service efficacy (Kristensen, Andersen & Pedersen 2012), the work package uses level of education as proxy for public service efficacy.

The analysis will estimate whether benefit recipients were more likely to be diagnosed with stress and receive stress medication after the new requirement was implemented than before. Interaction terms between the requirement and resource scarcity will be included to test whether people with different levels of economic resource scarcity reacted differently to the new requirement (H2), while an interaction term between the requirement and level of education will be used to test H4 regarding the moderating impact of public service efficacy. Controls will be included for important individual-level characteristics such as whether individuals had been diagnosed with stress or had received stress medication prior to 2007. Finally, a placebo analysis (e.g., Finseraas 2015) with a sample of employed people who match the unemployed on background characteristics will be conducted to examine whether increases in stress diagnoses and use of stress medication might be part of a general societal trend.

Work Package 3b: Field experimental evidence

Work Package 3b supplements Work Package 3a by using data from two randomized field trials conducted in Denmark in 2008 among recipients of unemployment benefits who became unemployed during Weeks 8-29 of 2008 and who were eligible for unemployment benefits at that time. The work package thus adds to the project by allowing for an estimation of the causal impact of rules on burden in a real-world setting. Both trials were launched by The Danish Agency for Labour Market (A Danish central authority which is responsible for implementing and following up on employment policy in Denmark) and conducted by researchers who are experienced field experimentalists. The trials are reported and discussed in Maibom, Rosholm & Svarer (2017). The first field trial (N=1,360) was conducted in Northern Jutland and involved an additional requirement for the treatment group. This group had to show up for group meetings with other unemployed people and a caseworker on a weekly basis. The second field trial was conducted in Aarhus and involved mandatory activation after 13 weeks of the unemployment spell with the aim of generating a so-called threat effect; namely, that the threat of participation in activation propels some individuals to increase their search activity in order to find a job before the activation begins (Rosholm & Svarer 2008: 385f). The two trials can be characterized as red tape from the perspective of recipients since the treatments do not directly help the unemployed get a job. Indeed, none of the treatments produced significant effects on employment rates either in the short or in the longer run, even though research on the trials demonstrated that the treatments indeed produced the expected differences between treatment and control groups in meeting activity (the first trial) and activation intensities (the second trial) (Maibom, Rosholm & Svarer 2017).

Previous research using the field experiments has solely focused on the employment effects of the interventions. In contrast to this perspective, I am focusing on the administrative burden of new rules. The analysis will therefore estimate whether benefit recipients in the treatment groups are more likely to be diagnosed with stress and receive stress medication after the treatment sets in as compared to the control groups. Similar to Work Package 3, interaction terms between the treatments and resource scarcity (measured by income among other members of the household and by household capital) and treatments and educational level will be included to test differential effects, and control will be included for important individual-level characteristics such as whether individuals had been diagnosed with stress or had received stress medication prior to 2007.

One challenge to both of the designs in Work Packages 3a and 3b is that administrative burden may be associated with a general distrust in public authorities. If this is the case, administrative burden may make individuals less inclined to visit their general practitioner even in cases where burden does cause stress reactions, thus biasing estimates towards zero and making these conservative cases. Work Package 3b therefore uses election participation as an alternative measure of burden which is not subject to this potential source of bias. Assuming that burden will cause distrust in public authorities beyond the duration of the experiment, this part of the investigation expects lower election participation in the treatment groups than in the control groups after the treatment has taken place. This approach resembles policy feedback research which typically estimates how welfare program participation affects electoral and civic participation (e.g., Soss 1999a). However, at the same time the design offers a major improvement over empirical feedback research since such research generally suffers from selection problems (results may be biased due to non take-up of welfare programs) and from a lack of comparability between various welfare programs (many factors are likely to vary across programs and hence it is problematic to ascribe differences in participation across different welfare programs to one single factor). More specifically, the work package will estimate the impact of the treatment on consecutive election participation at the three elections that took place most recently after the completion of the field experiments: the European parliamentary elections of June 2009, the local government elections held in November 2009, and the Danish parliamentary election in September 2011. The work package will moreover compare differences in election participation between the treatment and control groups prior to the experiments to check baseline equivalence.

Work Package 3c: Quasi-experimental studies of the impact of deservingness changes

Work Package 3c uses two intensively covered media cases known in Denmark as the "Poor Carina" and the "Lazy Robert" cases to study the impact of deservingness on administrative burden. On November 28, 2011, a woman on social security benefits named Carina appeared on national television. Carina, a single mother who had access to several welfare benefits, became the subject of intense political and public debate when it was revealed that she had a disposable income of approximately the same size as people on low incomes. In September 2012, Robert Nielsen, a man who had been receiving social security benefits for several years, was interviewed on Danish television. During the interview, Robert Nielsen stated that he preferred social security benefits to low income jobs. Like the "Poor Carina" case, this revelation caused considerable public and political debate about the design of social security benefits and the deservingness of people receiving the benefits. As a consequence, approximately 4 out of 10 Danes changed their opinions on social security benefits when asked whether they considered the benefits too low, appropriate, or too high, significantly the most becoming less supportive regarding the size of the benefits (Hedegaard 2014). These stories offer a remarkable quasi-experiment on the growth of stigma among the public toward a certain group of welfare beneficiaries, leading to the question of whether beneficiaries experienced that stigma.

The analysis will estimate whether recipients of social security benefits were more likely to be diagnosed with stress and receive stress medication in the aftermath of the two TV interviews. Since new rules on social security benefits came into effect as of January 1, 2012 (BEK no. 190 2012) and again January 1, 2014 (Law no 894 2013), two separate analyses will be conducted. The first focuses on the impact of the "poor Carina" case. Two analytical strategies – both assuming an immediate impact of the interview – will be used to take into account seasonal fluctuations in stress and depression. The first strategy compares the likelihood of being diagnosed with stress and of receiving stress medication among recipients of social security benefits in the period from November 29, 2011-December 31, 2011 with the same periods in the years 2007-2010. The second strategy uses a regression discontinuity design to study in a narrow time period, spanning from one month before to one month after the interview, whether the story had an impact on the dependent variables studied. In both cases, placebo analyses will be conducted to examine whether possible changes in the dependent variables can be observed mainly for the recipients of social security benefits, as I expect. A solid match on background characteristics is unlikely in this case. Instead, the placebo analysis will be conducted on samples of other individuals outside the labor market such as people on unemployment or early retirement benefits.

The analysis of the "Lazy Robert" case will rely on similar strategies and with similar placebo groups. The first strategy assumes that the TV interview had an impact well into 2013. Hence, the likelihood of being diagnosed with stress and of receiving stress medication among recipients of social security benefits in the period January-September 2012 (prior to the interview) will be compared to the likelihood in the same period in 2013 (after the interview). The second strategy uses a regression discontinuity design to study in a period spanning from one month before to one month after the interview whether it had an impact.

References

Aarts, Alexander A. et al. 2015. "Estimating the Reproducibility of Psychological Science", *Science*, 349(6251): 943-951.

Aizer, Anna. 2003. "Low Take-Up in Medicaid: Does Outreach Matter and for Whom?", *American Economic Review*, 93(2): 238-241.

Aizer, Anna. 2007. "Public Health insurance, Program Take-Up, and Child Health", *The Review of Economics and Statistics*, 89(3): 400-415.

Alatas, Vivi, Abhijit Banerjee, Rema Hanna, Benjamin A. Olken, Rinan Purnamasari, and Matthew Wai-Poi. 2013. "Ordeal Mechanisms In Targeting: Theory And Evidence From A Field Experiment in Indonesia", *NBER Working Paper No. 19127.*

Baicker, Katherine, Sarah L. Taubman, Heidi L. Allen, Mira Bernstein, Jonathan N. Gruber, Jospeh P. Newhouse, Eric C. Schneider, Bill J. Wright, Alan M. Zaslavsky, and Amy N. Finkelstein. 2013. "The Oregon Experiment: Effects of Medicaid on Clinical Outcomes", *The New England Journal of Medicine*, 1713-1722.

Bandura, Albert. 1977. "Self-Efficacy: Toward a Unifying Theory of Behavioral Change", *Psychological Review*, 84(2): 191-215.

Bandura, Albert. 1993. "Perceived Self-Efficacy in Cognitive Development and Functioning", *Educational Psychologist*, 28(2): 148-177.

Bandura, Albert. 1997. *Self-Efficacy: The Exercise of Control*, New York: W. H. Freeman & Company.

Bandura, Albert. 2001. "Social Cognitive Theory: An Agentic Perspective", *Annual Review of Psychology*, 52: 1-26.

Bandura, Albert. 2009. "Cultivate Self-Efficacy for Personal and Organizational Effectiveness", pp. 179-200 in E.A. Locke (ed.): *Handbook of Principles in Organization Behavior*, 2nd ed., New York: Wiley.

Bansak, Cynthia and Steven Raphael. 2006. "The Effects of State Policy Design Features on Take-Up and Crowd-out Rates for the State Children's Health Insurance Program", *Journal of Policy Analysis and Management.*

Bardoloi, Yashvardhan. 2016. "Hong Kong is a Wealthy City, Yet More Than a Million are Living in Poverty", http://yp.scmp.com/news/features/article/103333/hong-kong-wealthy-city-yet-more-million-are-living-poverty, last accessed Septmber 27, 2017.

Bartlett, Susan, Nancy Burstein, and William Hamilton. 2004. *Food Stamp Program Access Study Final Report*. Economic Research Service. http://www.myfoodstamps.org/pdf_files/ProgAccess.pdf, accessed March 10, 2017.

BEK no. 179. 2007. *Bekendtgørelse om rådighed*, bekendtgørelse nr. 179 af 19/02/2009.

BEK no. 1083. 2007. *Bekendtgørelse om en ændring af bekendtgørelse om rådighed*, bekendtgørelse nr. 1083 af 14/09/2007.

BEK no. 743. 2009. *Bekendtgørelse om en aktiv beskæftigelsesindsats*, bekendtgørelse nr. 743 af 03/07/2009.

BEK no.190. 2012. *Bekendtgørelse af lov om aktiv socialpolitik*, bekendtgørelse nr. 190 af 24/02 2012.

BEK no. 128. 2017. *Bekendtgørelse af lov om arbejdsløshedsforsikring m.v.*, bekendtgørelse nr. 128 af 31/01/2017.

Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. 2006. "Behavioral Economics and Marketing in Aid of Decision Making among the Poor", *Journal of Public Policy and Marketing* 25(1): 8–23.

Besley, Timothy and Stephen Coate. 1992. "Workfare versus Welfare: Incentive Arguments for Work Requirements in Poverty-Alleviation Programs", *The American Economic Review*, 82(1): 249-261.

Bhargava, Saurabh and Dayanand Manoli 2015. "Psychological Frictions and the Incomplete Take-Up of Social Benefits: Evidence from an IRS Field Experiment", *American Economic Review*, 105(11): 1-42.

Blom-Hansen, Jens Rebecca Morton, and Søren Serritzlew. 2015. "Experiments in Public Management Research", *International Public Management Journal*, 18: 151-170.

Bouffard-Bouchard, Therese. 1990. "Influence of Self-Efficacy on Performance in a Cognitive Task", *The Journal of Social Psychology*, 130(3): 353-363.

Bozeman, Barry. 1993. "A Theory of Government 'Red Tape'", *Journal of Public Administration Research and Theory*, 3(3): 273-304.

Bozeman, Barry. 2000. *Bureaucracy and Red Tape*, Upper Saddle River, NJ: Prentice Hall.

Bozeman, Barry and Mary K. Feeney. 2011. *Rules and Red Tape: A Prism for Public Administration Theory and Research*, London UK: M. E. Sharpe.

Brien, Michael, and Christopher Swann. 1999. *Prenatal WIC Participation and Infant Health: Selection and Maternal Fixed Effects,* Working paper, Charlottesville: Univ. of Virginia Department of Economics.

Brodkin, Evelyn Z. 1992. "The Organization of Disputes: The Bureaucratic Construction of Welfare Rights and Wrongs", *Studies in Law, Politics, and Society*, 12: 53-76.

Brodkin, Evelyn Z. and Malay Majmundar. 2010. "Administrative Exclusion: Organizations and the Hidden Costs of Welfare Claiming", *Journal of Public Administration Research and Theory*, 20: 827-848.

Bruch, Sara K., Myra Marx-Ferree, and Joe Soss. 2010. "From Policy to Polity: Democracy, Paternalism, and the Incorporation of Disadvantaged Citizens", *American Sociological Review*, 75: 205-226.

Burden, Barry C., David T. Cannon, Kenneth R. Mayer and Donald P. Moynihan. 2012. "The Effect of Administrative Burden on Bureaucratic Perception of Policies: Evidence from Election Administration", *Public Administration Review*, 72(5): 741-751.

Campbell, Andrea Louise. 2007. "Universalism, Targeting, and Participation", pp. 121-140 in Joe Soss, Jacob S. Hacker, and Suzannne Metler (eds.), *Remaking America: Democracy and Public Policy in an Age of Inequality*, New York: Russell Sage Foundation.

Carlier, B.E., M. Schuring, F.J., van Lenthe, and A. Burdorf. 2014. "Influence of Health on Job Search Behavior and Re-employment: The Role of Job-Search Cognitio9ns and Coping Resources", *Journal of Occupational Rehabilitation*, 24(4): 670-679.

Carvalho, Leandro S., Stephan Meier, and Stephanie W. Wang. 2016. "Poverty and Economic Decision-Making: Evidence from Changes in Financial Resources at Payday", *American Economic Review*, 106(2): 260-284.

Chetty, Raj, Adam Looney, and Kory Kroft. 2009. "Salience and Taxation: Theory and Evidence", *American Economic Review,* 99(4): 1145–77.

Chetty, Raj, and Emmanuel Saez. 2013. "Teaching the Tax Code: Earnings Responses to an Experiment with EITC Recipients", *American Economic Journal: Applied Economics,* 5(1): 1–31.

Cozma, S., L.C. Dima-Cozma, C.M. Ghiciuc, V. Pasquali, A. Saponaro and F.R. Patacchioli. 2017. "Salivary Cortisol and Alpha Amalase: Subclinical Indicators of Stress as Cardiometabolic Risk", *Brazilian Journal of Medical and Biological Research*.

Currie, Janet. 2006. "The Take-up of Social Benefits", pp. 80-148 in Alan J. Auerbach, David Card, and John M. Quigley, (eds.), *Public Policy and the Income Distribution*, New York: Russell Sage.

Currie, Janet and Jeffrey Grogger. 2001. "Explaining Recent Declines in Food Stamp Program Participation," pp. 203-244 in William G. Gale and Janet Rothenberg Pack (eds.), Brookings Papers on Urban Affairs, Washington, DC: Brookings Institution.

Currie, Janet and Jonathan Gruber. 1996. "Health Insurance Eligibility, Utilization of Medical Care, and Child Health", *The Quarterly Journal of Economics*, 111: 431-466.

Dias, Janice and Stephen Maynard-Moody. 2007. "For-Profit Welfare: Contracts, Conflicts, and the Performance Paradox", *Journal of Public Administration Research and Theory*, 17: 189-211.

Ebenstein, Avraham and Kevin Stange. 2010. "Does Inconvenience Explain Low Take-Up? Evidence from Unemployment Insurance", *Journal of Policy Analysis and Management*, 29(1): 111-136.

Finseraas, Henning. 2015. "The Effect of a Booming Economy in Early Childhood on the Propensity to Vote: Evidence from a Natural Experiment", *British Journal of Political Science*, published online ahead of print.

Esping-Andersen, Gösta. 1990. *The Three Worlds of Welfare Capitalism*, Princceton, NJ: Princeton University Press.

Fenger, H.J.M. 2007. "Welfare Regimes in Central and Eastern Europe: Incorporating Post-Communist Countries in a Welfare Regime Typology", *Contemporary Issues and Ideas in Social Sciences*, 3(2): 1-30.

French, Jeffrey A., Kevin B. Smith, John R. Alford, Adam Guck, Andrew K. Birnie, and John R. Hibbing. 2014. "Cortisol and Politics: Variance in Voting Behavior is Predicted by Baseline Cortisol Levels", *Physiological Behavior*, 61-67.

Gilens, Martin. 2000. *Why Americans Hate Welfare: Race, Media, and the Politics of Antipoverty Policy*, Chicago: University of Chicago Press.

Glynn, Adam N. 2013. "What Can We Learn with Statistical Truth Serum? Design and Analysis of the List Experiment", *Public Opinion Quarterly,* 77: 159-172.

Goodman-Bacon, Andrew. 2016. *The Long-Run Effects of Childhood Insurance Coverage: Medicaid Implementation, Adult Health, and Labor Market Outcomes*, NBER Working Paper 22899, Cambridge, MA.

Hansen, Helena, Philippe Bourgois, and Ernest Drucker. 2014. “Pathologizing Poverty: New Forms of Diagnosis, Disability, and Structural Stigma under Welfare Reform”, *Social Science & Medicine*, 103: 76-83.

Hansen, Hans and Marie Louise Hultin. 1997. “Aktuelle og potentielle modtagere af velfærdsydelser med hovedvægt på boligstøtten 1987-1992”, Arbejdsnotat no. 10, Copenhagen: Rockwool Fondens Forskningsenhed.

Heckman, James, and Jeffrey Smith. 2003. *The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program*. NBER Working paper: No. w9818.

Hedegaard, Troels Fage. 2014. “Stereotypes and Welfare Attitudes: A Panel Survey of How ‘Poor Carina’ and ‘Lazy Robert’ Affected Attitudes towards Social Assistance in Denmark”, *Nordic Journal of Social Research*, 5: 139-160.

Heinrich, Carolyn J. 2016. “The Bite of Administrative Burden: A Theoretical and Empirical Investigation”, *Journal of Public Administration Research and Theory*, 26(3): 403-420.

Heinrich, Carolyn J. and Robert Brill. 2015. “Stopped in the Name of the Law: Administrative Burden and its Implications for Cash Transfer Program Effectiveness”, *World Development*, 72: 277-295.

Herd, Pamela. 2015. “How Administrative Burdens Are Preventing Access to Critical Income Supports for Older Adults: The Case of the Supplemental Nutrition Assistance Program”, *Public Policy and Aging Report*, 25: 52-55.

Herd, Pamela, Hope Harvey, Thomas Deleire and Donald P. Moynihan. 2013. “Shifting Administrative Burden to the State: The Case of Medicaid Take-Up”, *Public Administration Review*, 73, S1: S69-S81.

Hernanz, Virginia, Franck Malherbet, and Michele Pelizzari. 2004. “Take-Up of Welfare Benefits in OECD Countries: A Review of the Evidence”, *OECD Social, Employment and Migration Working Papers*, no. 17, Paris: OECD Publishing.

Hofer, Myron A., Carl T. Wolff, Stanford B. Friedman, and John W. Mason. 1972. “A Psychoendocrine Study of Bereavement: Part I. 17-Hydroxycorticosteroid Excretion Rates of Parents Following Death of Their Children from Leukemia”, *Psychosomatic Medicine*, 34(6): 481-491.

Horan, Patrick and Patricia L. Austin. 1974. “The Social Bases of Welfare Stigma”, *Social Problems*, 21: 648-657.

Jilke, Sebastian, Nicolai Petrovsky, Bart Meuleman, and Oliver James. 2017. “Measurement Equivalence in Replications of Experiments: When and Why it Matters and Guidance on How to Determine Equivalence”, *Public Management Review*, 19(9): 1293-1310.

Jourden, Forest. 1993.”The Influence of Feedback framing on Self-Regulatory Mechanisms: A Glass Half Full or Half Empty”, *Faculty working paper no. 93-0117*, University of Illinois: Bureau of Economic and Business Research.

Karlan, Dean, Margaret McConnell, Sendhil Mullainathan, and Jonathan Zinman. 2015. “Getting to the Top of Mind: How Reminders Increase Saving”, Unpublished manuscript.

Kling, Jeffrey, Jeffrey Liebman, Lawrence Katz, and Lisa Sanbonmatsu. 2004. “Moving to Opportunity and Tranquility: Neighborhood Effects on Adult Economic Self-Sufficiency and Health from a Randomized Housing Voucher Experiment”, Harvard University.

Kling, Jeffrey R., Sendhil Mullainathan, Eldar Shafir, Lee C. Vermeulen, and Marian V. Wrobel. 2012. “Comparison Friction: Experimental Evidence from Medicare Drug Plans”, *Quarterly Journal of Economics,* 127(1): 199–235.

Kopczuk, Wojciech, and Cristian Pop-Eleches. 2007. “Electronic Filing, Tax Preparers and Participation in the Earned Income Tax Credit”, *Journal of Public Economics* 91:1351–67.

Kristensen, Nicolai, Lotte Bøgh Andersen, and Lene Holm Pedersen. 2012. ”Public Service Efficacy”, *International Journal of Public Adinistration*, 35(14): 947-958.

Krosch, Amy R. and David M. Amodio. 2010. “Economic Scarcity Alters the Perception of Race”, *Proceedings of the National Academy of Science*, 111(25): 9079-9084.

Kuklinski, James H., Paul N. Sniderman, Kathleen Knight, Thomas Piazza, Philip R. Tetlock, Gordon R. Lawrence, and Barbara Mellers. 1997. “Racial Prejudice and Attitudes Toward Affirmative Action”, *American Journal of Political Science:* 41: 402-419.

Kumlin, Staffan and Bo Rothstein. 2005. “Making and Breaking Social Capital: The Impact of Welfare-State Institutions”, *Comparative Political Studies*, 38(4): 339-365.

Kuye, Ifedayo O, Richard G. Frank, and J. Michael McWilliams. 2013. “Cognition and Take-up of Subsidized Drug Benefits by Medicare Beneficiaries”, *JAMA Internal Medicine*: 1100-1107.

Law no. 429, 31/5 2000. *The Act on Processing of Personal Data*.

Law no. 894, 04/07 2013. *Lov om ændring af aktiv socialpolitik, SU-loven, lov om børnetilskud og forskudsvis udbetaling af børnebidrag og forskellige andre love.*

Lipsky, Michael. 1980. *Street-level Bureaucracy: Dilemmas of the Individual in Public Services*, New York, NY: Russell Sage.

Locke, E.A. and G.P. Latham. 1990. *A Theory of Goal Setting and Task Performance*, Englewood Cliffs, NJ: Prentice-Hall.

Maibom, Jonas, Michael Rosholm, and Michael Svarer. 2017. “Experimental Evidence on the Effects of Early Meetings and Activation”, *Scandinavian Journal of Economics*, 199(3): 541-570.

Manchester, Coilleen F. and Kevin J. Mumford. 2010. *How Costly is Welfare Stigma?, Separating Psychological Costs from Time Costs*, Purdue University, Krannert School of Management Working Paper 1229.

Mani, Anandi, Sendhil Mullainathan, Eldar Shafir, and Jiaying Zhao. 2013. “Poverty Impedes Cognitive Function”, *Science*, 341: 976-980.

Mettler, Suzanne. 2002. “Bringing the State Back in to Civic Engagement: Policy Feedback Effects of the G.I. Bill for World War II Veterans”, *American Political Science Review*, 96(2): 351-365.

Mettler., Suzanne. 2011. *The Submerged State: How Invisible Government Policies Undermine American Democracy*, Chicago, IL: University of Chicago Press.

Moffit Robert A. 1983. “An Economic Model of Welfare Stigma”, *American Economic Review*, 73: 1023-1035.

Moynihan, Donald P. and Pamela Herd. 2010. “Red Tape and Democracy: How Rules Affect Citizenship Rights”, *American Review of Public Administration*, 40: 654-670.

Moynihan, Donald P., Pamela Herd, and Hope Harvey. 2015. “Administrative Burden: Learning, Psychological, and Compliance Costs in Citizen-State Interactions”, *Journal of Public Administration Research and Theory*, 25(1): 43-69.

Moynihan, Donald P., Pamela Herd, and Elizabeth Ribgy. 2016. “Policymaking by Other Means: Do States Use Administrative Barriers to Limit Access to Medicaid?”, *Administration and Society*, 48(4): 497-520.

Mullainathan, Sendhil and Eldar Shafir. 2013. *Scarcity: Why Having Too Little Means So Much*, New York, NY: Time Books, Henry Holt & Company LLC.

Nater, U.M., R. La Marca, L. Florin, A. Moses, W. Langhans, M.M. Koller & U. Ehlert. 2006. “Stress-Induced Changes in Human Salivary Alpha-Amylase Activity: Associations with Adrenergic Activity”, *Psychoneuroendocrinology*, 31(1): 49-58.

Neiman, Jayme, Karl Giuseffi, Kevin Smith, Jeffrey French, Israel Waismel-Manor, and John Hibbing. 2015. “Voting at Home Is Associated with Lower Cortisol than Voting at Polls”, *PloS ONE*, 10(9).

OECD (2015). *Ageing and Employment Policies: Denmark 2015: Working Better with Age*, Paris: OECD Publishing.

Orbach, Barak. 2006. “Unwelcome Benefits. Why Welfare Beneficiaries Reject Government Aid?”, *Law and Inequality: A Journal of Theory and Practice*, 24(107): 107-155.

Petersen, Michael Bang, Rune Slothuus, Rune Stubager, and Lise Togeby 2010. "Deservingness versus Values in Public Opinion on Welfare: The Automaticity of the Deservingness Heuristic", *European Journal of Political Research*, 50: 24-52.

Petersen, Michael Bang. 2012. "Social Welfare as Small-Scale Help: Evolutionary Psychology and the Deservingness Heuristic", *American Journal of Political Science*, 56(1): 1-16.

Petersen, Niels B.G., Anders F. Svane, and Per Skursch. 2017. "How Does Citizens' Perceived Self-Efficacy Affect Coproduction? Evidence From an Experiment", paper presented at the 2017 IRSPM Conference in Budapest, Hungary.

Pescosolido, Bernice A. and Jack K. Martin. 2015. "The Stigma Complex", *Annual Review of Sociology*, 41: 87-116.

Rattcliffe, Caroline, Signe Mary-McKernan, and Kenneth Finegold. 2007. *The Effect of State Food Stamp and TANF Policies on Food Stamp Program Participation*, Washington, DC: Urban Institute.

Romero-Moreno, R., A. Losada, B.T. Mausbach, M. Marquez-Gonzalez, T.L. Patterson, and J. Lopez. 2011. "Analysis of the Moderating Effect of Self-Efficacy Domains in Different Points of the Dementia Caregiving Process", *Aging and Mental Health*, 15(2): 221-231.

Rosholm, Michael and Michael Svarer. 2008. "The Threat Effect of Active Labour Market Programmes", *Scandinavian Journal of Economics*, 110(2): 385-401.

Schmidt, S. 2009. "Shall We Really Do It Again? The Powerful Concept of Replication Is Neglected in the Social Sciences", *Review of General Psychology*, 13(2): 90-100.

Schram, Sanford F., Joe Soss, Richard C. Fording, and Linda Houser. 2009. "Deciding to Discipline: Race, Choice, and Punishment at the Frontlines of Welfare Reform", *American Sociological Review*, 74: 398-422.

Schwabish, Jonathan. 2012. *The Impact of Online Food Stamp Applications on Participation.* Paper presented November 2012 at the Annual Meeting of the Association of Public Policy and Management, Baltimore.

Scott, P.G. and Sanjay K. Pandey. 2000. "The Influence of Red Tape on Bureaucratic Behavior: An Experimental Simulation", *Journal of Policy Analysis and Management*, 19(4): 615-633.

Shadish William R., Thomas D. Cook, and Donald T. Campbell. 2002. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*, Belmont, CA: Wadsworth Cengage Learning.

Shafir, Eldar. 2014. "Poverty and Civil Rights: A Behavioral Economics Perspective", *University of Illinois Law Review*: 205-230.

Shah, Anuj K., Sendhil Mullainathan, and Eldar Shafir. 2012. "Some Consequences of Having Too Little", *Science*, 338: 682-685.

Shah, Anuj K., Eldar Shafir, and Sendhil Mullainathan. 2015. "Scarcity Frames Value", *Psychological Science*, 26(4): 402-412.

Schanzenbach, Diane W. 2009. *Experimental Estimates of the Barriers to Food Stamp Enrollment*, Madison, WI: Institute for Research on Poverty.

Sheely, Amanda. 2013. "Second-Order Devolution and Administrative Exclusion in the Temporary Assistance for Needy Families Program", *Policy Studies Journal*, 41(1): 54-69.

Schuman, Michael. 2014. "Hong Kong's Twist on Welfare: The More you Work, the More Welfare You Get", *Time*, January 2014, http://time.com/1198/hong-kong-welfare/, accessed September 27, 2017.

Sommers, Benjamin D, Meredith Roberts Tomasi, Katherine Swartz, and Arnold Epstein. 2012. "Reasons For The Wide Variation In Medicaid Participation Rates Among States Hold Lessons For Coverage Expansion In 2014", *Health Affairs*, 31(5): 909-919.

Soss, Joe. 1999a. "Lessons of Welfare: Policy Design, Political Learning, and Political Action", *American Political Science Review*, 93(2): 363-380.

Soss, Joe. 1999b. "Welfare Application Encounters: Subordination, Satisfaction, and the Puzzle of Client Evaluations", *Administration & Society*, 31(1): 50-94.

Spears, Dean. 2011. "Economic Decision-Making in Poverty Depletes Behavioral Control", *The B.E. Journal of Economic Analysis & Policy*, 11(1): 1-42.

Stuber, Jennifer and Mark Schlesinger. 2006. "Sources of Stigma for Means-Tested Government Programs", *Social Science & Medicine* 63: 933-45.

Super, David A. 2004. "Offering an Invisible Hand: The Rise of the Personal Choice Model for Rationing Public Benefits", *Yale Law Journal*, 113: 815-893.

Taelman, J., S. Van De Put, A. Spaepen, and S. Van Huffel. 2009. "Influence of Mental Stress on Heart Rate and Heart Rate Variability", pp. 1366-1369 in *4th European Conference of the International Federation for Medical and Biological Engineering*, Springer Berlin Heidelberg.

Tummers, Lars, Ulrike Weske, Robin Bouwman, and Stephan Grimmelikhuijsen. 2016. "The Impact of Red Tape on Citizen Satisfaction: An Experimental Study", *International Public Management Journal*, 19(3): 320-341.

Tversky, Amos and Daniel Kahneman. 1981. "The Framing of Decisions and the Psychology of Choice", *Science*, 211(4481). 453-458.

Van Oorschot, W. 1998. "Failing Selectivity: On the Extent and Causes of Non-Take Up of Social Security Benefits", pp. 101-132 in H. J. Andress (ed.), *Empirical Poverty Research in Comparative Perspective*, Ashgate, Aldershot.

Van Oorschot, W. 2000. "Who Should Get What, and Why? On Deservingness Criteria and the Conditionality of Solidarity Among the Public", *Policy & Politics*, 28(1): 33-48.

Van Oorschot, W. 2006. "Making the Difference in Social Europe: Deservingness Perceptions Among Citizens of European Welfare States", *Journal of European Public* Policy, 16(1): 23-42.

Vohs, Kathleen D. 2013. "The Poor's Poor Mental Power", *Science*, 969-970.

Wolfe, Barbara, and Scott Scrivner. 2005. "The Devil May Be in the Details", *Journal of Policy Analysis and Management,* 24: 499-522.

Zenger, Markus, Hendrik Berth, Elmar Brähler, and Yve Stöbel-Richter. 2013. "Health Complaints and Unemployment: The Role of Self-Efficacy in a Prospective Cohort Study", *Journal of Social and Clinical Psychology*, 32(1): 97-115.