

## Article

# The Bite of Administrative Burden: A Theoretical and Empirical Investigation

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## Abstract

The study of administrative burden—experienced in individual encounters with government—is being renewed with new theoretical developments and policy applications. Building on recent developments, this article aims to broaden the conceptual framing of administrative burden and extend its empirical investigation beyond concerns about access to and efficiency of public services to questions of individual and societal impacts. It also expands beyond the typical US or developed country context to examine this phenomenon in the setting of a large social protection program in South Africa, where the “bite” of administrative burden may potentially be bigger. The empirical analysis uses data from the South African Child Support Grant (CSG) evaluation to investigate how CSG program rules and requirements affected administrative burdens and erected barriers to grant receipt. The findings show that 60% of CSG recipients experienced an interruption or disconnection in grant receipt that appears to be associated with administrative burden, with 80% of those stoppages in error. The resulting loss of monthly benefits has significant negative implications for the outcomes of adolescents targeted by the program.

## Introduction

In 1887, Woodrow Wilson (1887) called attention to administrative burden, disparaging the “wearing friction” of government and arguing for a science of public administration “to straighten the paths of government, to make its business less unbusinesslike” (201, 203). Yet more concerted study of “bureaucratic encounters” and their associated burdens did not emerge until the 1970s (Kahn, Katz, and Gutek 1976), and even then, attention to the costs associated with interactions with the government tended to be stirred by particular

policy or program developments (e.g., social welfare reforms in the 1980s and 1990s). More recently, the study of administrative burden in the public management literature has been renewed with both new theoretical developments and policy applications. In their research on election administration, Burden et al. (2012, 742) defined administrative burden as “an individual’s experience of policy implementation as onerous.” This and related work (Moynihan, Herd, and Harvey 2014) has laid some groundwork for new extensions of research and illustrated important implications—political and social—of administrative burdens associated with government-individual interactions.

In this article, I build on these recent developments in the study of administrative burden in the public sector with the objective of expanding both its theoretical conceptions and empirical investigation. Returning to some earlier work in this literature, I extend the conceptual framing and scope of inquiry, including the types of interactions or encounters that generate burdens, their origins in both public policy and administration,

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and their implications for program access and impacts. Empirically, I aim to make two important advances: extending the quantitative analysis of administrative burden beyond concerns about access to and efficiency of public services to questions of individual and societal impacts, and expanding beyond the US/developed country context to less developed countries where the “bite” of administrative burden may potentially be bigger.

In the following section, I review the literature on administrative burden and draw on work by Kahn, Katz, and Gutek (1976) as a starting point for broadening a framework for theorizing about administrative burden and assessing its consequences empirically. I next describe the context for the empirical study presented here, a cash transfer program in South Africa (the Child Support Grant [CSG] program, the largest in Africa) that is reaching approximately 11 million children with monthly cash benefits to reduce poverty and inequality. The study design, methods, and data that are used in the empirical analysis to quantify administrative burden in the CSG program and evaluate its implications for children’s outcomes are then described, followed by a presentation and discussion of the findings. The final section concludes with a discussion of the implications of this research for public management and government effectiveness.

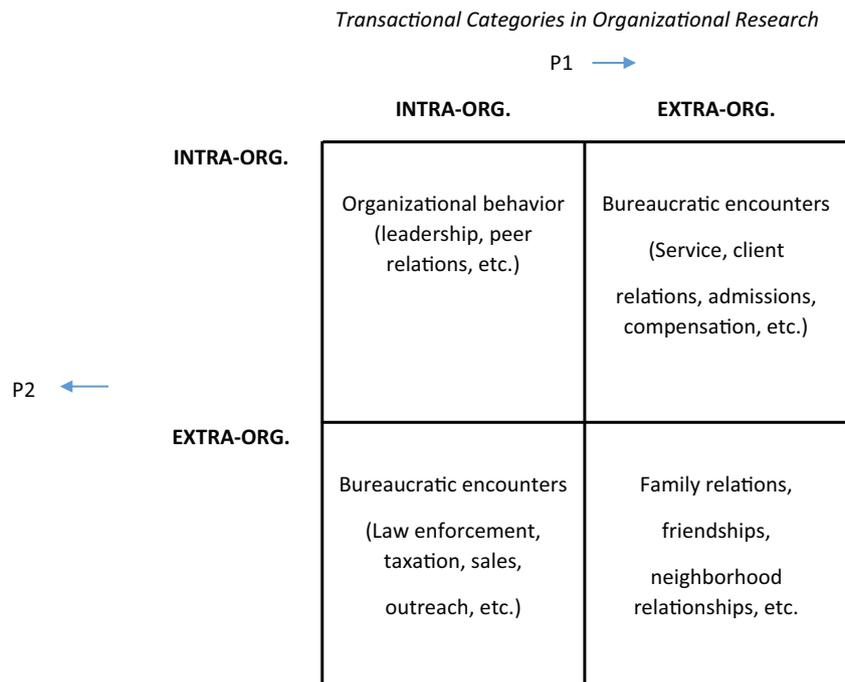
**Literature on Administrative Burden**

**Bureaucratic Encounters**

Early studies of bureaucracy (Presthus 1962; Weber 1946) focused on formal and informal interactions

among individuals within large organizations, and how structural characteristics of those organizations (e.g., hierarchy and rules) shaped individual behavior and organizational outputs. Although greater attention to organizational environments and bureaucratic responses to them, as well as interorganizational relations, followed (Evan 1966; Lawrence and Lorsch 1967; Pugh et al. 1969), the focus was primarily on intra-organizational consequences of these interactions. In this context, one might see the work of Kahn, Katz, and Gutek (1976) as groundbreaking in its elucidation of a framework for thinking about both intra- and extra-organizational transactions at individual and organizational levels, and in its introduction of the concept of “bureaucratic encounters.” Kahn, Katz, and Gutek describe a bureaucratic encounter as a “major intervening event in a causal sequence” that includes interactions between the characteristics of the client and agency, where those characteristics may determine immediate and longer-term outcomes, or whether an “episode of service delivery” occurs at all (185).

In their conceptual framework, reproduced in figure 1, Kahn, Katz, and Gutek distinguish between intra- and extra-organizational transactions, as well as between the person initiating the transaction and the person at whom the transaction is directed. The four resulting cells or “categories” of transactions include: (1) organizational behavior, where the person initiating the transaction and the person at whom it is directed are within the organization; (2) bureaucratic encounters where the person initiating the transaction is outside the organization to which



**Figure 1.** Depiction of Bureaucratic Encounters between Two Parties (Kahn, Katz, and Gutek 1976)

that transaction is directed (e.g., an individual applying for public welfare benefits); (3) bureaucratic encounters where the person initiating the transaction is inside the organization and it is directed toward individuals outside the organization (e.g., law enforcement); and (4) transactions where both the initiator and the person at whom it is directed are outside the organization.

The discussion of bureaucratic encounters located in the first quadrant of [figure 1](#) that are perceived of as burdensome or excessive has also been the subject of a related, more developed literature on organizational “red tape” ([Bozeman, Reed, and Scott 1992](#); [Buchanan 1975](#); [Pandey and Scott 2002](#); [Rosenfeld 1984](#)). Red tape is generally understood as constraints and impediments to organizational activities emanating from rules, regulations, and procedures, both internal and external ([Baldwin 1990](#); [Pandey and Scott 2002](#)). The connotations and operational definitions associated with organizational red tape are emphatically negative, with much of the corresponding empirical work focused on how organizational red tape limits or impedes organizational effectiveness ([Bozeman 1993](#); [Bozeman and Feeney 2011](#); [Feeney 2012](#)).

[Moynihan, Herd, and Harvey \(2014\)](#) distinguish research on “red tape” from that focusing on administrative burden as being primarily focused on how rules affect *administrative employees*. Indeed, studies of administrative burden appear to instead concentrate primarily on the bureaucratic encounters in cell 2 of [figure 1](#), that is, examining bureaucratic responses—at individual and organizational levels—to individuals outside of the organization seeking public services or benefits. Like the red tape literature, the focus is on interactions or experiences that are seen as unwieldy or restraining. [Moynihan and colleagues \(2013, 2014\)](#) have categorized the different types of administrative burden in this quadrant (i.e., associated with individuals seeking public services) as follows: learning costs, or the investment it takes to find out about a program and its relevance to an individual; compliance costs, or the rules and requirements for accessing the benefits or services; and psychological costs associated with the intrusiveness of the application process or rejection or stigma that might be experienced in the process. The literature on welfare reform, for example (discussed further below), has contributed particularly rich insights into how these different types of administrative burden have emerged as oppressive or taxing in the processes of distributing economic and social welfare benefits to the poor.

Increasingly, there has also been attention to the issues in cell 3, where burdens are imposed on citizens through, for example, the enforcement of laws (e.g., voter identification requirements), compliance conditions (e.g., security checks and restrictions at airports and public buildings), and what [Lipsky \(1984\)](#)

described as “reciprocal expectations” or obligations associated with individual and organizational interactions with bureaucracies. In fact, some outreach from government organizations to individuals that fits in this quadrant has also been shown to create compliance burden disparities, such as undue burdens for Earned Income Tax Credit (EITC) program access associated with EITC improper payment investigations ([Davis-Nozemack 2012](#)). Another ripe body of recent research in this area looks at the policy and administrative discretion of police departments—for example, in geographic deployment of officers and enforcement priorities and tactics—that makes it more likely to lead to the arrest of some offenders over others, and in ways that may bring about harmful distributive consequences (e.g., disproportionate arrest rates by race and class) ([Sekhon 2011](#)).

It is more challenging, however, to find some, if any, attention to how transactions in cell 4 of [figure 1](#)—between persons or entities outside an organization—might contribute to administrative burden, although I will present arguments and evidence that they do, and sometimes with unintended consequences. For example, if outreach for opportunities to access public services operates largely by word-of-mouth for some programs or groups, and misinformation is circulated through those extra-organizational encounters, this can create inadvertent barriers to accessing those services. In the same way, some extra-organizational encounters can work toward mitigating administrative burden, such as those facilitated by the work of individuals and entities involved in Enroll America, the nonprofit, nonpartisan network that aims to reach uninsured consumers with information and support for enrolling in and retaining health insurance coverage. More generally, this broader conceptual framework of bureaucratic encounters could also be applied in thinking not only about how administrative burden operates to generate negative and unintended consequences but also how interactions in these four quadrants might be structured and fostered to alleviate or abate administrative burdens and improve governmental effectiveness.<sup>1</sup>

1 To provide an example of how administrative burden manifests through each of the different types of bureaucratic encounters shown in [figure 1](#), I briefly discuss here the State of Wisconsin Bureau of Child Support (BCS) pilot program that was developed to address the problem of growing child support debt among noncustodial parents. The BCS worked with a county child support agency to establish administrative procedures and facilitate automation of essential processes for implementing the pilot program, so as to minimize burden to the county agency (of the type shown in cell 1 of [figure 1](#)). Letters were mailed from the State to those eligible to participate in the pilot program (an example of a bureaucratic encounter in cell 3, [figure 1](#)), but many individuals who had built up large child support debts were difficult to reach, having experienced incarceration and less stable housing. In addition, many who received information about the pilot program found it difficult to get through to the child support office to find out how to

### Policy or Administrative Burden?

Although these conceptual definitions and framing of administrative encounters characterize and differentiate fairly well the various ways in which burdens are created, encountered, or potentially mitigated in policy implementation, situating them conceptually in an “organizational transactions” framework may neglect the policy “roots” of some of these burdens. Lipsky (1984), for example, describes how in the politics of policymaking, conflicts such as those concerning the values of resource distribution are often intentionally pushed down from the more visible legislative or executive arenas to be played out instead in lower-level bureaucratic contexts. In effect, thorny issues about the principles and values governing the distribution of public resources become embedded in the process of distributing them, where actions (e.g., reductions in agency staffing) are undertaken in the name of efficiency or budgetary stringency, resulting in less conspicuous rationing of benefits. Moynihan, Herd and Harvey (2015, 2) also recognizes how policymakers use the cover of administrative burden “as a form of ‘policy-making by other means’” (Lineberry 1977), which may also obscure its impacts (both intended and unintended).

Furthermore, program rules for federal programs formulated at the national level often intentionally allow for procedural discretion at a lower level of implementation, creating the potential for administrative burden to vary geographically and politically. Indeed, there is a robust body of work that suggests bureaucratic discretion is sometimes “baked into” policy with the explicit intent to restrict access to benefits—also known as “bureaucratic disenfranchisement”—for purposes of social control, discrimination, or otherwise rationing access to limited resources (Brodkin 1997; Lipsky 1984; Scott 1997; Soss, Fording, and Schram 2011). As Moynihan, Herd, and Rigby (2013, 2) explain, “the state can effectively thwart an individual from accessing benefits, even if eligible by law,” by enabling bureaucratic leeway for constructing complex rules and procedures that deter the pursuit of public benefits or services. Alternatively, federal policymaking, such as the National Voter Registration Act of 1993, can also actively work to prohibit states from implementing policies in ways that constrain access to public benefits or entitlements, in this case by allowing the use of drivers’ license data to automatically register voters and thereby remove barriers to voting for younger and poorer voters who are likely to move more frequently.

Brodkin (1997) illuminates the contradictions faced by “frontline” workers trying to assure compliance with regulatory guidelines, while interpreting the rules left ambiguous in policy. In her research on changing state responsibilities and flexibility in welfare policy administration during the 1990s, she points out the trade-offs inherent in tighter federal regulations and guidance (i.e.,

where state and local agencies are “rule-bound” in implementing policy) versus greater flexibility and discretion in determining resource allocations and the rules and procedures that guide them. She shows that increased devolution of authority and responsibility for interpretation of policy to lower administrative levels contributes to greater variation in administrative practices and in the distribution of benefits or resources, program content, and quality of services, including some “rationing” of public benefits and services.<sup>2</sup> Lipsky (1984) has described this type of rationing as “inconspicuous” policy, with its effects diffuse and its costs imposed through individual bureaucratic encounters. Super (2004) also notes how reducing the value of participation can discourage applications or encourage withdrawals from program participation, potentially discriminating against those most in need of benefits or services.

### Costs of Administrative Burden

One predictable and frequent finding in studies that have assessed the costs of administrative burden is that program access (or take up of benefits) is constrained and low. In the United States, take-up rates for a number of important social program interventions hover around 25%, including training and work supports, housing programs, and Medicaid (Currie 2006; Shore-Sheppard 2008; Wallace 2002). Some research has directly linked administrative burden to disconnections from or denial of benefits. In a study of welfare case closings, Bennett (1995) found that more than a quarter of welfare claimants had their benefits

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enroll (an example of learning costs and bureaucratic encounters represented in cell 2). And for those who succeeded in getting through to a caseworker, there were paperwork obligations, and caseworkers sometimes miscommunicated the requirements for program enrollment (compliance costs associated with bureaucratic encounters in cell 3). Those who could not get through formal channels often turned to other potential sources of support outside of the child support system, including parole officers, food pantry staff, and friends and family with knowledge of the child support system (learning costs and possible psychological costs associated with bureaucratic encounters in cell 4). Overall, efforts to allay administrative burden were insufficient to counter its toll, and only a third of those eligible for (and seeking to participate in) the pilot program gained access to it (Heinrich, Shager, and Burkhardt 2011).

2 Brodkin (1997) studied the Job Opportunities and Basic Skills (JOBS) program, in which federal funding for JOBS was tied to state expenditures, with the intent to create fiscal incentives for states to increase service provision. Facing a state budget crisis, she showed how Illinois adopted a “min-max” strategy, attempting to minimize state costs while maximizing federal reimbursements. The state mandated JOBS participation but then rationed the more expensive education and training services, so that the fraction of JOBS participants receiving education and training fell from 70% to 35%. Brodkin contrasted these results with those of Alameda County, California, which kept participation in JOBS voluntary and provided education services to the vast majority of its participants.

cut off while eligible because of problems with their documentation. Distinguishing between program exclusion driven by formal or informal organizational practices versus individual preferences, [Brodkin and Majmudar \(2010\)](#) found that higher administrative or procedural burden in the application process for Temporary Assistance for Needy Families (TANF) was associated with larger welfare caseload declines, and that the rate of exit from welfare due to procedural burdens was higher for more disadvantaged clients (i.e., those with less education and deeper poverty). Their findings are consistent with prior research showing that more disadvantaged individuals have fewer personal resources to draw on in navigating administrative burden and responding to procedural requirements ([Bendick, Lavine, and Campbell 1978](#); [Cherlin et al. 2002](#); [Super 2004](#)).

[Cherlin et al. \(2002\)](#) also sought to examine the costs of administrative burden in terms of the reduction or loss of TANF benefits in a sample of children and their caregivers in Boston, Chicago, and San Antonio. They found that 17% of caregivers reported that their benefits were cut or eliminated because the welfare office said they were not following the program rules, and that individuals most commonly responded by looking for work, cutting back on necessities, and turning to family and friends for assistance. Their analysis of interview data also suggested that sanctions and procedural case closings were more likely to affect families experiencing hardships (e.g., those without a telephone or car and living in lower-quality neighborhoods), and for whom compliance with program requirements was more difficult. In an earlier study of welfare recipient responses to negative bureaucratic encounters, [Soss \(1999, 366\)](#) found that individuals came to see the agency as “a pervasive threat in their life,” which in turn diminished their feelings of political efficacy and willingness to challenge the bureaucracy.

[Moynihan, Herd, and Rigby \(2013\)](#) and [Herd et al. \(2013\)](#) examined state Medicaid policies to identify factors contributing to administrative burden in Medicaid program administration and to assess the implications of reducing administrative burdens for program access. In a state-level analysis, Moynihan, Herd, and Rigby found higher rates of Medicaid take-up among both the general population and children when state applications for the program had fewer questions, lower expense reporting requirements, and did not require an interview. In their case study of Medicaid policy changes in Wisconsin, Herd et al. documented changes made in administrative procedures (as the state expanded its public health care program from BadgerCare to BadgerCare Plus) that were specifically intended to reduce administrative burden and support program enrollments (e.g., auto-enroll,

express-enroll, increased outreach, etc.).<sup>3</sup> Herd et al. found increases in children’s enrollment of nearly 7% per month (over 1,300 individuals on average) in the 2 years following the implementation of these program changes. Importantly, their research identifies clear-cut policy levers that states can use to reduce administrative burden in means-tested social welfare programs and improve access for those eligible for program benefits.

In studying administrative burdens associated with managed care in substance abuse treatment organizations, [Alexander and Lemak \(1997\)](#) and [Lemak, Alexander, and Campbell \(2003\)](#) sought to measure the costs of complying with managed care requirements in terms of organizational costs and efficiency (i.e., intra-organization implications of externally imposed rules and requirements that fit in cell 1 of [figure 1](#)), recorded as the number of hours per week that treatment and administrative staff in these organizations dedicated to nontreatment activities such as utilization review, billing and reimbursement, and negotiating contracts or terms of reimbursements. Documenting increases in these burdens over time (between 1995 and 2000) as federal requirements such as those of the Health Insurance Portability and Accountability Act (HIPAA) became more complex, Lemak, Alexander, and Campbell estimated that 1 h of substance abuse treatment therapy was associated with about \$60 of non-salary operating expenses. And in regression analyses that controlled for organizational characteristics, they found a negative relationship between administrative burden and organizational efficiency and productivity (the latter measured as treatment sessions per full-time equivalent). Although their empirical analysis does not extend to patients served by these organizations, they point out that patients could be affected by resulting cuts in or restricted access to existing programs, or organizations’ diminished capacity to continue participating in funding programs connected with managed care.

In general, this literature review has aimed to characterize (rather than comprehensively appraise) the work on administrative burden, while at the same time using Kahn, Katz, and Gutek’s framework to broaden the conceptual framing of administrative burden in terms of encounters between individuals (and other entities) with bureaucracy and their possible positive as well as negative effects (i.e., in mitigating as well as exacerbating administrative burden). A number of studies

3 Their empirical analysis focused only on children whose family incomes were below 185% of the poverty line and who were already eligible for program benefits prior to the expansion of Medicaid BadgerCare Plus in order to identify increases in program take-up associated with the reduced administrative burden.

in this segment of the literature have been concerned with social welfare programs and the consequences of administrative burden for individuals' access to public benefits and services. And although administrative burden is surely experienced in developed and developing countries throughout the world, a US-focus has dominated this body of research.

In one of the few studies that empirically examines these particular issues in a developing country context, [Álvarez, Devoto, and Winters \(2008\)](#) investigated the reasons behind dropouts from Mexico's Oportunidades program and distinguished between (household) self-selection (e.g., failing to meet program conditions or to pick up checks) and the possibility that the grant conditions created high costs for very poor households that precluded their receipt of the cash transfers. They found that program administration, rules, and requirements had a significant influence on whether recipients stayed in the program, although only some of the ways in which it operated were problematic. In particular cases—for example, in the effort to aid indigenous populations or the extreme poor in low-marginality communities—they determined that operational guidelines for the program were increasing dropouts and working against the program's goal of reaching the most vulnerable. Alternatively, they also found that a new "just-in-time monitoring system" led to corrections of inclusion errors that likely improved the program's efficiency.

In this research, I extend the investigation of administrative burden in the context of cash transfer (or "social protection") programs in less developed countries (in this case to South Africa). Administrative problems in cash transfer programs have been well-documented by the International Labor Organization ([Tabor 2002](#)), including: excessive administrative costs; poor staff remuneration; neglect of compliance and enforcement functions; difficulties in record-keeping; excessively complex procedures; delays in processing benefit claims; and inadequate attention to ensuring that applicants understand program rules and requirements. Furthermore, cash transfer programs such as South Africa's CSG that apply a means test to establish eligibility for benefits—a feature common to most of these programs in Latin America, Sub-Saharan Africa, and Southeast Asia—frequently elevate program administration demands and barriers to take up, contributing to uneven program coverage and unintended exclusion of poorer households ([Bastagli 2009](#); [Devereux 2002](#); [Hernanz, Malherbet, and Pellizzari 2004](#)).

In this case study of South Africa's CSG, I highlight the different types of encounters (using Kahn, Katz, and Gutek's framing) in which administrative burden manifests in the program, as well as actions that the

South African government eventually took to attempt to reduce burdens and improve program effectiveness. Importantly, this work not only empirically documents the extent to which administrative burden reduced access to program benefits but it also estimates the costs of the resulting loss of benefits in terms of individual outcomes (adolescents' education and engagement in risky behaviors). Although a number of studies (to date) have implied that individuals may be harmed by losses of or denials of access to program benefits, it is more difficult to find quantification of these costs to individuals or society.

### The CSG Program in South Africa and the Research Design

The CSG program in South Africa is a means-tested, unconditional cash transfer program that is paid to a child's parent or caregiver, with the objectives of reducing poverty among children and ameliorating the negative consequences of inequalities stemming from Apartheid. The CSG began in 1998 and was initially limited to households with children younger than 7 years old ([Agüero, Carter, and Woolard 2007](#)). Over the subsequent 14 years, the CSG underwent numerous changes in program rules and administration, including increases in the age limit for CSG eligibility, until it was ultimately extended in 2012 to cover children up until their 18th birthday. In 1999, the means test was changed to qualify households based on the caregiver's and spouse's income only, and in 2008, benefit payments were adjusted for cost of living, resulting in a real increase in purchasing power (according to Statistics South Africa).<sup>4</sup> The South African Department of Social Development (DSD) also changed application requirements in a deliberate attempt to reduce transaction burdens and barriers to grant receipt. These changes, along with increases in the age of eligibility, led to steady increases in CSG program participation, so that by July 2014, the CSG was reaching over 11 million children monthly, with improved take-up rates in poorer areas ([Samson, Heinrich, and Regalia 2011](#)).

In 2009, the South African DSD, the South African Social Security Agency (SASSA), and UNICEF South Africa commissioned an evaluation to learn more about the CSG's effects on child and adolescent welfare, as well as to justify the continuation and further extensions of the grant program. The evaluation design included both qualitative and quantitative investigations of program implementation and impacts, with the objective to better understand how

4 Hall, K. 2013. *Income and Social Grants – Child Support Grants*. <http://www.childrencount.ci.org.za/indicator.php?id=2&indicator=10> (accessed January 30, 2014).

beneficiaries were accessing and using the CSG; the individual, household, and community or administrative factors that prevented eligible children from accessing the CSG, and the pathways through which the CSG might potentially improve children's development, health, education, and other aspects of their well-being. Because the Bill of Rights in South Africa's Constitution guarantees the fundamental right of children to social protection and coverage of the CSG-eligible population was very high at this time, it was not possible to employ a random assignment evaluation design. At the same time, the numerous program changes over time and the challenging context in which the program was implemented (discussed below) contributed to substantial variation in timing and length of grant receipt among CSG beneficiaries that was useful for both exploring and estimating program effects, as well as the potential role of administrative burden in moderating them.

#### Study Data

The data collected in the CSG impact evaluation included surveys of households and children in five South African provinces—Western Cape, Eastern Cape, KwaZulu-Natal, Gauteng, and Limpopo—between October 2010 and March 2011. Households with three groups of children were randomly sampled using SASSA management information system data that verified the households' eligibility by the means test: (1) children born in 2000 who were enrolled in the CSG at birth or before age 18 months; (2) children born in 2000 who enrolled between age 5 and 9 years; and (3) children 15–17 years old who were beneficiaries. Surveys were completed with 85% of the sampled cases. This empirical analysis focuses on the 15- to 17-year-old children who were currently receiving the CSG or who had previously received the CSG and had completed a confidential, self-administered survey to gather information about risky behaviors (response rate = 89%). Together, these survey data include detailed information on household wealth, demographic structure, caregiver, and other household characteristics; CSG application, enrolment, and access; children's schooling, labor, time allocation, and participation in risky behaviors; and many more variables ( $n = 1,113$ ).

Recognizing the importance of understanding the experiences of beneficiaries in selecting into the CSG and different levels of grant receipt, the qualitative research that preceded quantitative data collection probed for information about how individuals became aware of program and changes in it, the application process, any grant disruptions and household efforts to reapply, their interactions with the social welfare offices and related issues that might affect when the

grant was first accessed and how long it was received. The qualitative research findings informed the design of household and adolescent surveys with the explicit intent to empirically measure factors that influenced selection into different levels (months) of CSG receipt and the timing (earlier or later in the child's life), including those related to administrative burden.

#### Study Measures: Administrative Burden

The evaluation approach was also informed by prior research on the CSG in South Africa that described a multitude of administrative and implementation challenges, stemming in part from the large number of requirements imposed *in practice* on caregivers seeking to receive the CSG for a child. For example, applicants are required to have a birth certificate for the child, an identity document for the mother or caregiver, a hospital card, a health record for the child, and documentation that the parental or caregiver income meets the means test limits (Zembe-Mkabile et al. 2012). At the time that the CSG first rolled out in 1998, UNICEF (2005) reported only one-fourth of children in the eligible age range had a birth certificate.

Recent studies confirm that document requirements continue to be an important barrier to grant access (Mirugi-Mukundi 2009; National Income Dynamics Study 2009; Zembe-Mkabile et al. 2012). Additionally, the qualitative research undertaken in this research pointed to numerous other documents that might be requested in course of the application process “in special circumstances,” such as: a police affidavit (if key documents are missing); a letter with the ward councilor's stamp (to establish proof of address); proof of (un)employment for the means test; and others (DSD-SASSA-UNICEF 2011). I classify these as examples of bureaucratic encounters in cell 2 of figure 1, which contribute to the costs of compliance with rules and requirements for individuals applying for the grant, and generate an empirical measure of “document problems.” Below are some illustrative comments from focus groups conducted in the qualitative field research (DSD-SASSA-UNICEF 2011, 27–28), which also allude to the *discretionary* nature of some of the administrative burdens experienced by CSG applicants:

Sometimes they ask you to provide proof of residence, or electricity or water. If you are unemployed or staying in RDP houses you cannot have these things, because we do not pay for water and do not use metered electricity.

They wanted an affidavit proving that the father of the child has agreed that you apply for the CSG.

She had a problem with her ID book, so she couldn't register. The child was only registered six years later because of no ID.

You can lose your ID and go to Home Affairs to get another one, and you find that you do not get it for a long time and so you cannot register.

You find that they ask you too many questions which you cannot respond to and you end up giving up.

These administrative burdens made it less likely for eligible children whose mothers were deceased or absent to get access to the CSG, even though they were among the poorest and most vulnerable (Case, Hosegood, and Lund 2005; McEwen, Kannemeyer, and Woolard 2009).

The limitations of administrative structures and capacity established for implementing the CSG—such as limited service hours in application offices, inadequately trained staff, language and communication barriers, and a dearth of computers and privacy in processing applications—also contributed to administrative burden (i.e., bureaucratic encounters in cell 3 of figure 1), including long queues and waiting periods, confusion about how and where to apply, and a lack of consistency in the application of program rules across and within government offices (Goldblatt, Rosa, and Hall 2006; Mirugi-Mukundi 2009; Patel 2011).

If SASSA have enough staff, we will not wait for a long time there.

Social welfare officials were not informing us about all the required documents, so you have to go up and down.

If welfare officials are in a certain village and you go and try to apply, people from that village wouldn't allow you to apply.

When you get there they tell you to go and get an affidavit, and when you come back they tell you it is wrong.

These types of burdens were captured in measures of the number of times caregivers applied for the CSG, hours spent waiting at the social welfare office, distance to the nearest office, as well as other related measures of information and transaction costs.

Beginning around 2007, the South African government stepped up efforts to simplify and speed the CSG applications process and more effectively communicate changes in program rules (e.g., age of eligibility). SASSA officials who determined eligibility for the CSG conducted outreach through information campaigns and direct contact with eligible caregivers—also an example of bureaucratic encounters

in cell 3 of figure 1—to make them aware of the opportunity to apply or reapply for the grant when the age of eligibility changed. A number of measures constructed for the empirical analysis indicate how caregivers and other household members obtained information about the program and its various rules and eligibility changes.

I received a letter from SASSA informing me to come to reapply.

We heard about it on the radio, that a child who is 16 can now receive grant till the age of 18.

We distribute pamphlets and do road shows, and we go to the local radio station and give information, also to the indunas in the rural areas.

[SASSA official from Limpopo, listing some communication strategies used to inform local people about the CSG.]

Information circulating from the “road shows,” campaigns, and individual experiences with the CSG and social welfare offices flowed into communities, both encouraging and dampening interest and efforts to apply for the CSG. Examples of these types of bureaucratic encounters between individuals outside of the government organizations implementing the CSG (cell 4 in figure 1) include:

I was also told by my child: ‘Mama, go and apply so I can get transport fare to school, because you do not make enough money from vending’.

We never tried because I was working piece jobs, and I just heard that if you work it does not matter how much you earn, you don't qualify.

Most people were afraid to apply because corruption has been rife in government departments and they were not sure whether this was another away of robbing them.

We wanted to see if other people go and get the grant before we can go and apply.

#### Study Measures: Treatment

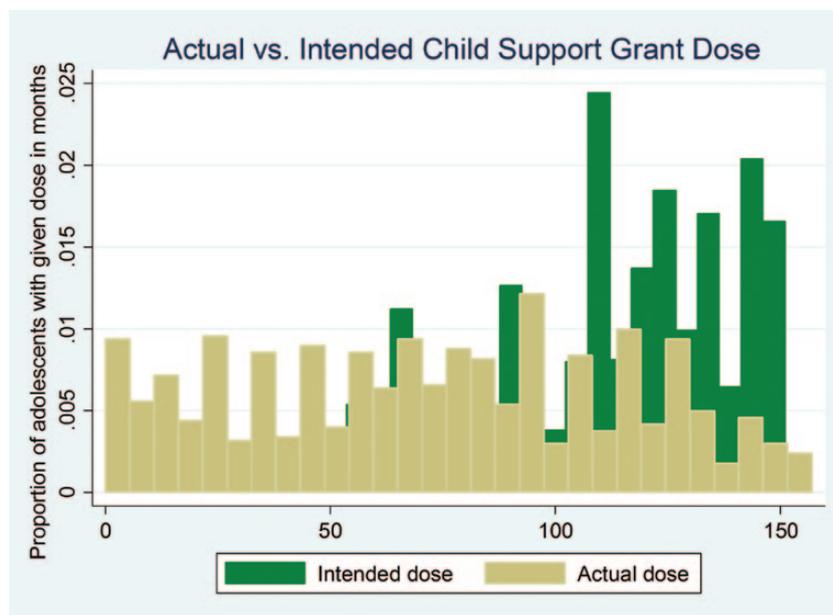
Because the analysis focuses on adolescents who had a caregiver that received the CSG at some time in their lives, the primary treatment measure is constructed to capture “dose,” or the number of months the adolescent was exposed to or could benefit from cash transfer receipt. The crude measure of CSG dose that was calculated and employed in the DSD-SASSA-UNICEF (2012) impact evaluation—using the age at which children first began to receive the grant as the start date and the survey date as the end date—was first replicated. However, data from the household survey for

adolescents that asked if receipt of the CSG had ever been interrupted showed that 60% of all adolescents in the study sample had experienced an interruption in CSG receipt at some point. Furthermore, among those whose cash transfer receipt was interrupted, more than half did not restart CSG receipt again during the study period.

To develop an improved measure of CSG receipt, survey and administrative data were used to identify (1) the first date that the adolescent received the CSG; (2) the date of disconnection from CSG receipt; (3) the date of CSG restart, if benefit receipt was restored; (4) the date of the survey, which represented the last date that CSG receipt could be observed for the adolescent; and (5) the length of the interruption, or time (in months) between the interruption and restart dates. An individual beneficiary's CSG dose (in months) was then measured: (1) from start date to stop date (for those who were disconnected), (2) from start date to survey date minus time interrupted (for those interrupted), and (3) from start date to the survey date (for those never interrupted). Individuals whose answers to these questions were contradictory or chronologically improbable were removed from the analysis sample—including those who reported starting the CSG before the program's initiation (the large majority, or 134 cases) or who reported a dose greater than the adolescent's age or an interruption longer than total grant receipt feasible or a problematic birthdate—leaving measures of “actual” dose for 459 male adolescents and 468 females in this study. The [supplementary appendix table](#) presents descriptive statistics for all measures used in this study and compares adolescent

and household characteristics, treatment measures, and adolescent outcomes for all adolescents with CSG receipt versus the subsample of those with improved dosage measures (separately for males and females). This table shows that there were no statistically significant differences between the adolescents with and without the improved measures of actual CSG receipt.

Measures of “intended” CSG dose for all adolescents in the sample were constructed next by calculating the number of months in which the adolescents were age-eligible for the program, starting from the month in which they first started receiving the CSG to the age when they would no longer be eligible to receive the grant (or when surveyed). This measure takes into account changes in eligibility that occurred over the course of the program's rollout, that is, in which the age of eligibility increased up to 9 years in 2003, 11 years in 2004, 14 years in 2005, 15 years in 2008, and up to age 18 in 2010. In effect, this measure is the dosage adolescents would receive if there were no interruptions or disconnections from cash transfer receipt from the time they first became eligible to the time they were no longer eligible to receive the grant or were observed in the survey. Those whose grant receipt was interrupted or stopped while age-eligible were coded as having “bad stops”; these “bad stops” account for 81.5% of interruptions and disconnections. The average “dose loss”—calculated as intended dose minus actual dose—among all adolescents in the sample was 19.7 months of cash transfer receipt; for those with “bad stops,” the average dose loss was considerably higher at over 30 months (see [figure 2](#)).



**Figure 2.** Actual versus Intended CSG Dose in Months

As discussed earlier, studies of administrative burden have primarily assessed its implications for access to program benefits or services. Because cash transfers can have immediate effects in increasing household consumption (Devereux 2002; Samson, Heinrich, and Regalia 2011), as well as in buffering against macroeconomic shocks experienced by the poor, improving access to the grant by reducing administrative burdens should also be reflected in program impacts. In addition, the timing of benefit receipt—early versus late—may matter for children’s outcomes such as enrollment in schooling, grade completion, and others, where earlier receipt is associated with larger impacts (de Janvry and Sadoulet 2006; Heinrich, Hoddinott, and Samson 2013; Leroy, Ruel, and Verhofstadt 2009). Still, the research base is devoid of empirical investigations of how unintended diminution (or termination) of cash transfer programs benefits might reduce or limit impacts.

#### Study Measures: Outcomes

Prior studies of the CSG have found that cash transfers improve children’s school attendance and nutrition and reduce child hunger, child labor, and risky behaviors among adolescents (DSD-SASSA-UNICEF 2012; Samson, Heinrich, and Regalia 2011). Researchers have described an “enormous risk associated with adolescence in South Africa,” due to the high prevalence of HIV and alcohol use among young people that is consistently associated with sexual risk taking and sexual coercion (Kalichman and Kaufman 2007; Morojele et al. 2004). A growing body of evidence also suggests that risky behaviors, particularly sexual activity, vary with household consumption expenditures and income shocks, which implies a role for cash transfer programs in helping to mitigate risky behavior, as well as poverty and hunger (Robinson and Yeh 2011). In analyzing the effects of administrative burden on adolescent outcomes, this study focuses on how it potentially moderates the program’s effects on adolescent educational attainment and their engagement in risky behaviors.

The improved measures of CSG receipt are used in analyzing the effects of the timing and dosage of cash transfers on the following risky behaviors (as confidentially reported by the adolescents at the time of the survey): sexual activity and number of sex partners; pregnancy; alcohol use and age at first alcohol use; drug use and criminal activity. Sexual activity is measured as an indicator that the adolescent “never had sex” (i.e., sexual intercourse); the number of sex partners is an interval measure, and pregnancy is an indicator of “ever pregnant.” Approximately 17.5% of the adolescents in this sample reported having sexual intercourse, and 17% of these had more than one sex partner. Similarly, alcohol use is measured as “never

drank alcohol,” and drug use as “never used drugs.” About one-third of these adolescents had started drinking alcohol and another quarter had initiated drug use. Age at first alcohol use is recorded as zero if the adolescent never drank alcohol, and lower values represent later starting ages (whereas higher values indicate an earlier start in drinking). Finally, criminal activity is a binary measure indicating “no criminal activity”; the youth were asked if they had ever participated in any of the following criminal activities: stealing, “house-breaking,” rape or sexual assault, selling drugs, assault, or “none.” Approximately 27% of adolescents in the sample had engaged in at least one of these criminal activities. Educational attainment is measured as the highest grade completed, where the average is grade 8.8 for males and grade 9.2 for females (see the [supplementary appendix table](#)).

#### Estimation of the Implications of Administrative Burden

In undertaking this analysis, I first replicated the estimation performed with the crude measure of CSG dose that was employed in the DSD-SASSA-UNICEF (2012) impact evaluation, and then estimated program impacts with the improved dosage measure generated in this study. For brevity, I do not present those results here, although it is worthwhile to note that using the improved CSG dose measure to estimate the “dose-response function,” where the response is the impact of a given level (number of months) of cash transfers on the outcome of interest, generates a clearer and stronger picture of the (positive) relationship between cash transfer receipt and adolescent outcomes (i.e., reduced engagement in risky behaviors).<sup>5</sup>

The primary question of interest in this research is to understand how administrative burden—which is associated with lower levels of CSG receipt—potentially influences adolescent outcomes. I employ propensity score matching (PSM) with exact matching to estimate the effects of being interrupted or disconnected from the CSG on adolescent outcomes. Generally, matching methods measure program impact as the average difference in outcomes for treated units minus a weighted average of outcomes for comparison units, where the

5 I use generalized propensity score (GPS) matching methods in this analysis to adjust for selection into *levels* (number of months) of treatment. GPS is an extension of propensity score matching (PSM) methods to cases in which treatment is a continuous rather than binary measure (Hirano and Imbens 2004). The average dose-response function,  $\mu(t) = E[Y(t)]$ , is calculated for a specific treatment level in  $T$ , controlling for  $X$  and assuming unconfoundedness (i.e., that mean outcomes for comparison cases are identical to outcomes of adolescents who received  $T$  years of the grant after conditioning on  $X$ ). The results are available from the author upon request.

weights are a function of observables  $X$ . PSM constructs the statistical comparison group by matching treated units to comparison units with similar values of the propensity to receive treatment. In this analysis, the “treatment” is measured as (1) an indicator for “never interrupted” (i.e., no interruptions or disconnections from grant receipt) and, alternatively, as (2) an indicator for “bad stops,” which takes a value of one if CSG receipt was interrupted in error (while the youth was still eligible to receive the grant). The validity of this approach relies on two assumptions: (1) conditional mean independence—that is, conditional on observed characteristics, comparison group members have the same mean outcomes as the treatment group would have in the absence of treatment—and (2) sufficient common support (or overlap in the distribution of propensity scores for treatment) to produce valid matches (Rosenbaum and Rubin 1983).

In specifying the PSM models, I exact (or hard) match on the intended dose of CSG—that is, the total months of CSG the adolescent was eligible to receive—and control for (or match on) other factors expected to influence interruptions and disconnections in estimating their effects on adolescent outcomes. I additionally exact match on the adolescents’ age at the time of the survey in estimating effects on educational attainment (so that the highest grade completed is compared for youth of the same age). I use the treatment effects estimator (in Stata) with nearest neighbor matching and set the tolerance to use in determining exact matches (for each outcome estimated), as well as the distance metric (Euclidean). The standard errors (SEs) of the estimates are Abadie-Imbens robust SEs, which account for the fact that the propensity scores are estimated. After-matching balancing tests are used to assess the quality of the matches.<sup>6</sup>

I hypothesize that among adolescents with the same *intended* dose of CSG transfers, those whose grant receipt is never interrupted will experience larger (positive) effects of the CSG. Alternatively, among adolescents with the same *intended* dose of CSG transfers, those whose grant receipt is interrupted or stopped in error (“bad stop”) will have diminished or worse outcomes. I estimate these models separately for males and females and adjust the tolerance band (or caliper) in the second-stage matching procedure to ensure

exact matches on *intended* dose per month are realized for all cases in the estimation sample.

#### Predicting CSG Interruptions and Disconnections

The specification of the first-stage model in PSM—in this case, predicting interruptions and disconnections from the CSG (the treatment in this analysis)—is critical for adjusting for possible selection into treatment in estimating adolescent program outcomes, but also for understanding the potential role of administrative burden in moderating these outcomes. Qualitative and quantitative data on the rules and requirements for CSG receipt, as well as documentation of some of the challenges in implementing the CSG program, provided guidance for the model specification.

One set of variables included in these first-stage models was intended to adjust for any differences in adolescent and household demographic and geographic characteristics that may have affected their ability to get and maintain access to the grant (i.e., age, gender, race, and education level of the head of household; whether the household head was disabled or chronically ill, and geographic location, including the province in which the household resided and whether the residential setting was rural, periurban, informal, or urban). As discussed previously, the households included in the study sample met the means test for CSG eligibility, but it is possible that there were still varying levels of poverty among those receiving the grant that could have affected grant access. To further explore this, I used multiple questionnaire items to create a variable indicating if all of the household’s income came from the CSG, as well as indicators for more than three-fourths of household income from the CSG, one-half to three-fourths, and less than one half of household income from the CSG. Although households that reported receiving all of their income from the CSG (53% of those with CSG income) were significantly more likely to reside in the poorest province (Limpopo), these measures of income/poverty were not statistically significant predictors of grant interruptions or disconnections or “bad stops.” Other proxy measures of household wealth, such as whether the household had made home improvements, had access to electricity, and whether it possessed various assets, were also not statistically significant predictors in the first-stage models.

The second set of variables included in the first-stage models predicting CSG interruptions and disconnections or “bad stops” were intended to account for caregivers’ and adolescents’ experiences in accessing and maintaining access to the CSG. Both qualitative and quantitative data had shown that the frequent changes in the age of eligibility for the CSG contributed to confusion among those potentially eligible for the grant, as well as among those administering

<sup>6</sup> Although other matching techniques, such as coarsened exact matching or `psmatch2`, could also be used, I prefer the Stata `teffects` command because it takes into account the fact that propensity scores are estimated rather than known in calculating the SEs. The feature that allows for exact matching on one or more covariates is also readily implemented with this command. It also has a disadvantage, however, in that there is no post-estimation command for checking after-matching balance of the covariates. I handle this by estimating the same models with `psmatch2`, although I am only able to match (rather than exact match) on the intended dose. After-matching balance is confirmed for all covariates.

the program in social welfare offices. These measures included awareness and knowledge of CSG availability, such as whether the adolescent was aware of the CSG and knew the eligible age for the CSG; the formal and informal sources from which adolescents and households learned of the CSG (e.g., public agencies, school teachers, social workers, hospital, churches, NGOs, radio, friends, neighbors, etc.); whether the adolescent encouraged someone in the household to apply for the CSG; if the mother applied for the CSG; and whether the household respondent knew the current eligible age for the CSG. I also included measures of barriers to application, such as problems with documentation requirements, time spent waiting, and distance/time from the application office, as well as measures of households' persistence in applying, such as whether they reapplied after changes in rules governing program eligibility and the number of times they reapplied. However, I am precluded from precisely distinguishing between problems in grant receipt due to administrative (government) deficiencies versus those due to individuals' lack of understanding of eligibility rules or confusion about the rules.

### Findings on Administrative Burden in the CSG and Implications for Adolescent Outcomes

Initial analyses of interruptions and disconnections from the CSG showed that nearly half of those stoppages occur when the youth are age 13 or 14 years old (and two-thirds occur between ages 12 and 15), and that the large majority of these youth with interruptions or disconnections did not begin receiving the grant until they were school-aged. [Table 1](#) presents the results of a multinomial regression that predicts the determinants of grant disconnections (i.e., CSG was stopped and never restarted) and interruptions (stopped and then restarted), compared to the reference group of youth who did not experience any stoppage during their time of grant eligibility and receipt. Older youth were significantly more likely to be either disconnected or interrupted. Not surprisingly (given the repeatedly changing rules for age of eligibility), the odds of being disconnected are over 4,100% higher as age increases by 1 year. Given that the lion's share of stoppages were "bad stops," it is possible that many of these youth were disconnected in error, perhaps as the policy changes were working down to implementation at the social welfare offices. On the other hand, the odds of disconnection and interruption are slightly lower for those who start the grant later, possibly reflecting the declining rates of stoppage for those 15 and 16 years old, who presumably had only recently accessed the CSG at the time of survey (when the age of eligibility increased through 17 years), and/or due

to efforts by the South African government to better communicate changes in age of eligibility.

The next most influential predictor of disconnections appears to be directly related to administrative burden, that is, problems in producing documents required for access to the CSG. Individuals who have problems producing the required documentation have approximately 1,000% higher odds of being disconnected (with no grant restart); they also have about 340% greater odds of being interrupted. Interestingly, reapplying for the CSG due to changes in eligibility is negatively related to grant disconnections and significantly positively related to interruptions. This likely suggests that those who reapply are more likely to be interrupted (versus permanently disconnected) from grant receipt; the odds of being disconnected are 66% lower if someone in the household reapplies for the grant after a change in eligibility, whereas the odds of interruption are 550% higher in these cases (reflecting in part that those with no disconnection or interruption do not have to reapply). Other factors associated with a higher odds of disconnection are residence in the Limpopo province (one of the poorest in South Africa); not being aware of eligibility for the grant or hearing of it from informal sources, and cases in which the adolescent encourages the household head to apply (possibly suggesting that the caregiver is not taking initiative to apply).

[Table 2](#) presents the results of a logistic regression model that was estimated to specifically assess what factors predict "bad stops," or disconnections or interruptions that occurred while the youth was apparently still eligible for the grant. As expected, given that more than four-fifths of disconnections and interruptions appeared to be in error, the factors predicting "bad stops" are similar to those shown in [Table 1](#). Again, having problems with documents required for grant access is one of the most influential factors, with the odds of a bad stop more than 300% higher for those with document problems. Having to reapply due to changes in eligibility (likely associated with changes in the eligible age for youth) is also significantly associated with bad stops, although it appears that if one spends a longer time waiting to reapply, an unintended stop is less likely to occur. These results are suggestive of a role for administrative burden in driving disconnections and interruptions that should not have occurred. It is also notable that geography appears to be important as well; those living in periurban and informal settings have 64% and 103% higher odds (respectively) of experiencing a bad stop, whereas those residing in Gauteng (a less disadvantaged province) were significantly less likely to be disconnected or interrupted in error. (The relationship between age and bad stops is similar to that for any stoppage in cash transfer receipt.)

**Table 1.** Predicting Disconnections and Interruptions from the CSG

Predictor ( <i>n</i> = 928)	Disconnected			Interrupted		
	Odds Ratio	Z	<i>p</i> Value	Odds Ratio	Z	<i>p</i> Value
Age-time of survey	42.939	13.29	.000	2.678	5.06	.000
Age-first grant receipt	0.901	-3.12	.002	0.809	-6.73	.000
Adolescent-male	1.045	0.19	.848	1.171	0.79	.428
HH age	0.993	-0.62	.533	0.994	-0.67	.503
HH female	1.163	0.63	.531	1.223	0.94	.345
HH not African	0.401	-1.77	.077	0.819	-0.51	.613
HH no school (omitted)						
HH education: K-5	0.695	-0.96	.336	0.742	-0.90	.366
HH education: 6-8	0.496	-1.73	.083	0.607	-1.46	.144
HH education: 9-11	0.463	-1.78	.074	0.683	-1.02	.307
HH education: 12+	0.482	-1.44	.149	0.498	-1.51	.130
HH disabled	0.919	-0.20	.839	0.879	-0.37	.713
HH chronically ill	0.939	-0.24	.807	1.069	0.30	.763
Urban (omitted)						
Rural	0.552	-1.61	.107	0.932	-0.23	.819
Periurban	1.290	0.73	.463	1.167	0.53	.598
Informal setting	2.409	1.81	.071	1.695	1.19	.232
KwaZulu-Natal (omitted)						
Gauteng	0.618	-1.39	.163	0.588	-1.75	.081
Eastern Cape	1.467	1.08	.282	1.087	0.25	.801
Western Cape	1.098	0.20	.840	1.676	1.38	.166
Limpopo	3.855	3.08	.002	1.143	0.34	.734
Mother applied	0.634	-1.60	.110	1.287	0.97	.333
Adolescent not aware of eligibility	2.561	2.56	.011	0.827	-0.48	.634
HH encouraged to apply by adolescent	1.805	2.25	.025	1.308	1.18	.240
Adol. knowledge-formal sources	1.035	0.09	.928	0.782	-0.75	.452
Adol. knowledge-informal sources	2.122	2.36	.018	0.725	-1.14	.256
Adolescent knows eligible age	1.590	1.24	.214	1.059	0.17	.867
Reapplied due to change in eligibility	0.435	-2.39	.017	6.481	6.40	.000
No. of times reapplied	1.003	0.03	.976	1.049	0.52	.601
Document problems	11.103	3.25	.001	4.447	2.27	.023
Hours waited reapplying	1.006	0.11	.910	0.969	-0.68	.499
HH distance to social welfare office	0.995	-0.50	.618	0.999	-0.07	.946
HH knows eligible age	2.384	1.46	.144	0.702	-0.58	.563
HH knowledge-formal sources	0.791	-0.99	.321	1.109	0.51	.613
Constant	0.000	-12.82	.000	0.000	-4.83	.000
Pseudo <i>R</i> <sup>2</sup>						38.40%
Log-likelihood						-610.05

It is also important to note that in this particular analysis, I am only able to examine how administrative burden contributes to interruptions or stops in grant receipt; I am not able to measure the extent to which it may have deterred receipt of the CSG altogether or significantly delayed start of the grant for some children, although the qualitative data discussed earlier suggested these are other potential ways it might work against improving children's outcomes. In other words, this analysis likely underestimates the role and effects of administrative burden (as conceptualized in this work) in influencing program access and impacts. I now examine how cash transfer program impacts may have been moderated when youth received fewer

months of cash transfers than intended due to interruptions and disconnections from the CSG.

#### How Disconnections and Interruptions in Cash Transfers Moderate Program Impacts

In estimating the extent to which administrative burden (that results in disconnections and interruptions in cash transfer receipt) moderates CSG program impacts, I *exact* match adolescents on *intended* dose of CSG receipt (and also match on other variables that influence CSG receipt) to identify the effects of interruptions and disconnections from grant receipt on adolescent outcomes. Two measures of "treatment" are employed in this analysis: (1) an indicator for "never

**Table 2.** Predicting Bad Stops from the CSG

Predictor ( <i>n</i> = 929)	Bad Stop		
	Odds Ratio	Z	<i>p</i> Value
Age-time of survey	2.965	9.05	.000
Age-first grant receipt	0.895	-4.91	.000
Adolescent-male	1.092	0.58	.559
HH age	1.006	0.76	.450
HH female	1.257	1.40	.161
HH not African	0.763	-0.89	.374
HH no school (omitted)			
HH education: K-5	0.938	-0.26	.795
HH education: 6-8	0.656	-1.67	.095
HH education: 9-11	0.674	-1.42	.155
HH education: 12+	0.560	-1.71	.087
HH disabled	0.882	-0.47	.637
HH chronically ill	1.024	0.14	.888
Urban (omitted)			
Rural	0.805	-0.89	.371
Periurban	1.639	2.16	.031
Informal setting	2.034	2.14	.033
KwaZulu-Natal (omitted)			
Gauteng	0.564	-2.47	.013
Eastern Cape	1.342	1.24	.214
Western Cape	1.547	1.50	.133
Limpopo	1.497	1.35	.176
Mother applied	1.047	0.25	.806
Adolescent not aware of eligibility	1.268	0.94	.346
HH encouraged to apply by adolescent	1.339	1.68	.093
Adol. knowledge-formal sources	0.924	-0.32	.746
Adol. knowledge-informal sources	1.235	1.03	.303
Adolescent knows eligible age	1.296	1.03	.304
Reapplied due to change in eligibility	2.427	3.96	.000
No. of times reapplied	1.062	0.76	.449
Document problems	4.029	2.85	.004
Hours waited reapplying	0.932	-2.03	.042
HH distance to social welfare office	1.006	0.83	.406
HH knows eligible age	0.715	-0.89	.376
HH knowledge-formal sources	1.098	0.60	.547
Constant	0.000	-8.81	.000
Pseudo <i>R</i> <sup>2</sup>		16.07%	
Log-likelihood		-540.410	

interrupted” (i.e., no interruptions or disconnections from grant receipt) and (2) an indicator for “bad stops,” which takes a value of one if CSG receipt was interrupted in error (while the youth was still eligible to receive the grant). The other conditioning variables that are used to predict “never interrupted” or “bad stops” in the first-stage estimation of the propensity scores are those shown in Tables 1 and 2. Again, the hypotheses tested are: (1) for adolescents with the same *intended* dose of CSG receipt, those whose grant receipt was never interrupted will have better outcomes in adolescence and (2) for adolescents with the same *intended* dose of CSG receipt, those whose grant receipt was incorrectly stopped or disconnected will have worse outcomes.

Table 3 summarizes the results of these matching analyses for the two treatment variables (separately for males and females) and eight different adolescent outcomes (described earlier): (1) never had sex, (2) number of sex partners, (3) ever pregnant (females only), (4) never used alcohol, (5) age at first alcohol use, (6) never used drugs, (7) never engaged in criminal activity, and (8) highest grade completed. The difference in outcomes (average treatment effects) for the matched samples, the Abadie-Imbens robust SEs, and the *p* values (for ease in assessing statistical significance) are reported. With one exception, where statistically significant (at  $\alpha < 0.10$ ), the estimated effects are in the direction expected. Also, as noted earlier, covariate balance was attained in each estimation.

**Table 3.** Effects of Interruptions and Problematic Disconnections from CSG on Adolescent Outcomes

Adolescents Exact Matched on Intended Dose	Never Interrupted			Bad Stop		
	Difference (ATE)	SE	<i>p</i> Value	Difference (ATE)	SE	<i>p</i> Value
Outcome (females)						
Never had sex	0.055	0.030	.071	-0.010	0.032	.749
Number of sex partners	-0.235	0.090	.009	0.193	0.113	.088
Ever pregnant	-0.046	0.030	.129	0.027	0.034	.429
Never drank alcohol	0.017	0.048	.720	-0.021	0.048	.653
Age at first alcohol use	0.099	0.195	.612	-0.051	0.195	.791
Never used drugs	0.009	0.044	.830	0.004	0.042	.926
No criminal activity	0.134	0.045	.003	-0.074	0.045	.095
Highest grade completed	0.197	0.102	.054	-0.233	0.120	.053
Outcome (males)						
Never had sex	0.047	0.044	.293	-0.077	0.042	.068
Number of sex partners	-0.144	0.108	.182	0.044	0.102	.668
Never drank alcohol	0.054	0.051	.288	-0.087	0.048	.072
Age at first alcohol use	-0.270	0.193	.162	0.425	0.185	.022
Never used drugs	-0.072	0.055	.193	0.006	0.050	.907
No criminal activity	-0.127	0.055	.021	0.039	0.050	.438
Highest grade completed	0.025	0.056	.647	-0.017	0.053	.743

ATE, average treatment effect.

The results show that female adolescents are significantly more likely to have abstained from sex (predicted probability is 5.5 percentage points higher); to have had fewer sex partners (about one-fourth fewer) and to have refrained from criminal activity (by 13.4 percentage points) if their receipt of cash transfers was *not* interrupted. In addition, the highest grade completed for females increases by about one-fifth of a grade (0.197) if their receipt of the CSG was not interrupted. Correspondingly, when benefits are stopped in error for females, they are predicted to have more sex partners (about one-fifth more) and are less likely to have refrained from criminal activity (predicted probability is 7.4 percentage points lower), and their educational attainment decreases by 0.233 grades. Although fewer effects are observed for males, male adolescents also have a lower predicted probability of abstaining from sex (by 7.7 percentage points) and refraining from alcohol use (by 8.7 percentage points) if their benefits were stopped in error; they are also significantly more likely to start alcohol at an earlier age if they experience a bad stop. With the exception of criminal activity, the other estimated effects for males are in the expected direction, albeit not statistically significant.

#### Limitations of the Analysis

This study is subject to the same limitations as those of any nonexperimental analysis. The estimates of the effects of interruptions and disconnections from the CSG rely on the assumption that the model specification satisfies the property of unconfoundedness,

in particular, that the model appropriately adjusts for selection into treatment (interruptions or disconnections) as defined in this study. Although the CSG evaluation generated an unusually rich set of data for predicting and understanding how administrative burden and other factors contribute to cash transfer interruptions or disconnections, such an analysis is always subject to the possibility that some relevant, unmeasured factor could bias the results. I am nonetheless encouraged by the fact that the models satisfy balancing tests and that the findings are consistent with theory and prior research on the South African CSG.

In addition, as noted earlier, the results of this analysis are limited in fully accounting for and measuring how administrative burden affects access to cash transfers and how it potentially works against improving children's outcomes. Because I only have the date each child first started receiving the CSG, I am not able to capture the extent to which administrative burden may have prevented receipt of the CSG altogether for some eligible children or may have significantly delayed start of the grant for others. The qualitative data provided explicit reports from caregivers of long delays in accessing the grant due to document requirements that could not be readily met and cases where individuals gave up on their efforts to apply for the grant because of the extensiveness of the application requirements and/or initial failures to meet them. In effect, this empirical analysis is only a partial test of the theories about how administrative burden plays out in the different types of "bureaucratic encounters" described earlier.

## Conclusions

Although the study of administrative burden to date has been dominated by US-based investigations, researchers working in developing country contexts have also recognized the need for a deeper conceptual and empirical understanding of the constraints on bureaucratic actors and “opportunities to change bureaucratic action that impedes more effective development initiatives” (Cohen, Grindle, and Walker 1985, 1217). Administrative burden and related challenges to effective implementation of government programs are ubiquitous, and although they appear to manifest in similar ways in bureaucratic encounters in developed and developing countries, existing research suggests they tend to be more burdensome in means-tested transfer programs that target poorer populations. The South African CSG is not unique among cash transfer programs in its relatively complex and demanding requirements for application, including significant documentation requirements (birth certificate, identity document, proof of income, etc.), long waits at social welfare offices with limited service hours, and other infrastructure and capacity problems that may have contributed to misapplication of program rules and uneven coverage as the program was expanded (both within and across social welfare offices). The South African government deserves some credit for recognizing these problems and taking actions to improve the CSG application process and better communicate changes in program rules and procedures, which was reflected in lower rates of disconnections and interruptions of grant receipt over time. In addition, although the findings of this study suggested that the repeated changes in the age of eligibility for the CSG appeared to have exacerbated administrative problems and errors made in determining eligibility, they also facilitated a substantial expansion in program coverage to approximately 11 million beneficiaries by 2012.

It was also a goal of this study to broaden the examination of administrative burden theoretically (and empirically) in distinguishing sources of burden, as well as efforts to reduce it, including in encounters initiated by government, such as the South African government’s efforts to make households aware of the changes in eligibility requirements. Applying the Kahn, Katz, and Gutek (1976) framework, this study also considered and documented a source of administrative burden that may be transmitted when individuals outside of government communicate information (or misinformation) that affects individual decisions to seek (or not seek) access to government benefits or what they understand will be required in the process. This expansion in our thinking about how such encounters influence individual-bureaucratic interactions also encourages us to consider roles that other third parties—for example, nongovernmental

organizations, advocacy groups, and other civil society organizations or networks—might play in supporting citizens in their efforts to access public benefits, such as reaching out to potential eligible citizens who may be less likely to obtain information from formal governmental channels or who may need support in compiling documents required for application.

In addition, prior research on administrative burden has focused primarily on assessing how it constrains access to benefits (e.g., reduces program take-up) or how changes in program rules and requirements intended to reduce such burdens may increase program access, as in Herd et al.’s recent study of Wisconsin Medicaid policy changes. There is also some limited empirical work on how administrative burden may reduce program operating efficiency, but it is difficult to find previous studies that empirically demonstrate how administrative burden may moderate or degrade program impacts for beneficiaries. The empirical analysis undertaken in this study suggests potentially high costs associated with administrative burden in the South African CSG for children whose program benefits were interrupted or disconnected, leading to the loss of a substantial number of months of cash transfers. For both male and female adolescents, disconnections or interruptions in cash transfer receipt were associated with higher rates of engagement in risky behaviors in adolescence, including a lower likelihood that they abstained from sexual activity and a higher number of sexual partners. For females, they were also associated with lower educational attainment and a higher likelihood of criminal activity. Males were also less likely to refrain from alcohol use and more likely to start drinking at a younger age if their cash transfer receipt was stopped in error. Because young people living in South Africa are at significantly higher risk of HIV infection (with prevalence rates over 20% for females 18–24 years, Pettifor, Levandowski, and Mcphail 2011), engagement in these behaviors could lead to irrevocable negative impacts for society as well as these individuals. Thus, the fact that some CSG-eligible adolescents appeared to receive less protection from these risks due to administrative burden—which is something that could plausibly be alleviated with better public policies and administration of cash transfer programs—is a finding worthy of high-level policy and management attention. More scholarly attention to identifying the effects of administrative burden on program outcomes and impacts is likewise needed.

At the same time, this research reflects how challenging it is to empirically differentiate the effects of these different types of burden on individuals’ program access and outcomes, even when rich qualitative data provided important insights on their potential roles. Going forward, governments implementing social welfare programs could use this broader framework for anticipating

sources of administrative burden and identifying ways it could be reduced, enabling them to take early and aggressive steps to, for example, ensure that application requirements and processes are as simple and transparent as possible; that frontline staff administering the programs understand and are committed to applying program rules fairly; that updates to program requirements get communicated quickly and clearly; and that local (formal) infrastructure is used to communicate with and support the eligible population's efforts to successfully complete the application process and maintain access to benefits. Continuing efforts to expand empirical investigations of administrative burden and its implications within this broader framing of the problem and in other unexplored contexts would also deepen our understanding of these issues and the policy and administrative responses that might circumvent negative consequences.

Finally, to the extent that this research might spur additional exploration of the potential costs to government and society (not only individuals) of tolerating or even inducing administrative burden in both developed and developing country contexts, it could possibly alter future political debates about the trade-offs or harm associated with administrative burden. A recent article in *The Economist* (2015, 54) described the types of bureaucratic encounters portrayed in cell 2 of figure 1 as "ordeal mechanisms," implying that they are constructed to deter applications to social welfare programs from the less needy. At the same time, the story also acknowledged that "the tougher the ordeal, the greater the number of needy candidates who will fail to qualify." If future research can quantify, as done here, the costs of those foregone benefits—such as the diminution of children's health associated with lower rates of access to children's health insurance and their longer-term consequences for society—this issue might be construed in a different light in policy discussions and decision making to come.

### Supplementary Material

Supplementary material is available at the *Journal of Public Administration Research and Theory* online ([www.jpart.oxfordjournals.org](http://www.jpart.oxfordjournals.org)).

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