# Organizational Red Tape: A Measurement Experiment

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## ABSTRACT

Multiple public administration survey research projects have asked respondents to assess the level of red tape in their organizations. Many of these surveys use the following questionnaire item: "If red tape is defined as 'burdensome rules and procedures that have negative effects on the organization's effectiveness,' how would you assess the level of red tape in your organization?" Unfortunately, no research has tested the ways in which the language used in this item may bias responses. This research uses data from a 2010 national survey of 2,500 local government managers in the United States to test three variations of the Organizational Red Tape scale, investigating whether there is variation in perceived organizational red tape based on the question wording. The findings from this research contribute to the red tape literature by providing empirical evidence that the definition used in the Organizational Red Tape scale, a commonly used questionnaire item in public administration research, influences responses about red tape perceptions.

## INTRODUCTION

As noted in other places (Bozeman and Feeney 2011; Pandey and Scott 2002) there is an abundance of empirical red tape research investigating the ways in which managers perceive red tape and how those perceptions are related to job satisfaction, organizational commitment, public service motivation, and performance. As with other areas of public administration research, there are a number of weaknesses with the empirical red tape research including an overreliance on self-administered surveys (Houston and Delevan 1990; Wright, Manigault, and Black 2004), a dearth of research testing the reliability and validity of measures (exceptions are Coursey and Pandey 2007; Pandey and Scott 2002), and simplistic research designs and methods (Gill and Meier 2000; Houston and Delevan 1990, 1991, 1994; McCurdy and Cleary 1984; Meier 2005). There have been numerous calls for methodological improvement and more diverse research design in public management research (Brudney, O'Toole, and Rainey 2000; Cozzetto 1994; Gill and Meier 2000).

Although much of this criticism has been lodged against public administration research in general, red tape researchers have also been assessing the state of their empirical work.

Although empirical red tape research has been quickly developing, there is room for improvement. Researchers have identified gaps in the field and avenues for future research (Bozeman and Feeney 2011; Feeney, Moynihan, and Walker 2010; Pandey and Scott 2002), considering ways to improve measures, data, and methods. Red tape researchers note the need to reconceptualize the definition of red tape, enabling researchers and research subjects to better understand when a rule is red tape and when it is not, understand the multidimensional nature of red tape, and develop measurement experiments. This research uses a measurement experiment to advance our understanding of a common measure of organizational red tape.

Red tape researchers have repeatedly noted that red tape is a multidimensional concept that requires methods that account for these dimensions (Bozeman and Feeney 2011; Brewer and Walker 2010a; Feeney, Moynihan, and Walker 2010; Pandey and Scott 2002). Although researchers have used a variety of items to capture different types of red tape including personnel, communication, internal, external, budgeting, and information services red tape (Brewer and Walker 2010a, 2010b; Coursey and Pandey 2007; DeHart-Davis and Pandey 2005), they continue to use the following item as a global measure of organizational red tape: "If red tape is defined as 'burdensome rules and procedures that have negative effects on the organization's effectiveness,' how would you assess the level of red tape in your organization?" On one hand, because many researchers have used this item, the questionnaire item has face validity. On the other hand, the problem with the common use of this item as a global measure to capture organizational red tape is that it may limit our conceptualization of red tape as something that negatively affects effectiveness alone. Moreover, because "red tape" often has negative connotations—substituting for all negative aspects of bureaucracy—it is possible that the question wording triggers an overall negative response. Little to no research has tested the ways in which respondents may or may not be assessing red tape based on this definition or some other preconceived notion of "red tape." Moreover, no research has directly investigated how word usage in this common questionnaire item might be related to perceived red tape.

This research uses an online survey of local government managers to administer a measurement experiment testing the original Organizational Red Tape measure, investigating whether or not the wording of the original questionnaire item influences respondents. Does the definition provided in the Organizational Red Tape scale guide respondents to consider "red tape" and not just rules in general? Does the Organizational Red Tape scale capture the multidimensional nature of red tape or does it exclude other important negative outcomes of organizational red tape?

The survey instrument randomly assigned four types of red tape measures: the original organizational red tape measure, a second item that focuses on rules, a third that focuses on other values that are important to public administration (e.g., accountability, transparency, equity, and fairness), and a fourth which included no red tape definition. In the following section, I detail the history of the original Organizational Red Tape measure and common criticisms of that measure. Second, I describe the experiment and variation in linguistic difficulty of the four red tape items tested. Third, I present one-sample t-test and OLS regression analyses to compare how each item predicts red tape perceptions and to investigate

variation across the four items. I conclude with a discussion of the findings and what they mean for future empirical red tape research.

## ORGANIZATIONAL RED TAPE

Rosenfeld (1984, 603) offered one of the first definitions of red tape as "guidelines, procedures, forms, and government interventions that are perceived as excessive, unwieldy, or pointless in relationship to decision making or implementation of decisions." Bozeman (1993) later criticized Rosenfeld's (1984) definition as not distinguishing between good and bad rules and therefore failing to clearly define red tape as a negative phenomenon. Bozeman offered a more specific definition of red tape as "rules, regulations, and procedures that remain in force and entail a compliance burden for the organization but have no efficacy for the rules' functional object" (1993, 283). He later revised that definition to the following more succinct definition, "burdensome administrative rules and procedures that have negative effects on the organization's performance" (Bozeman 2000). Note that the latter definition specifically links red tape to performance, rather than the rule's functional object or purpose.

Because most, if not all, of the empirical red tape research has been conducted subsequent to Bozeman's (1993, 2000), work developing a theory of red tape it overwhelmingly relies on the definitions provided in that work. For example, DeHart-Davis (2007), defines red tape as "burdensome administrative policies and procedures that have negative effects on the city's performance." Others define red tape as "burdensome rules or procedures that have an adverse effect on organizational performance" (DeHart-Davis and Pandey 2005; Yang and Pandey 2009). Here too, red tape is a negative phenomenon and something that affects performance.

The first empirical measure developed to assess red tape perceptions was included in the National Administrative Studies Project (NASP) I, a survey administered to a sample public and private managers in Albany and Syracuse New York (Rainey, Pandey, and Bozeman 1995). Rainey, Pandey, and Bozeman (1995) called this measure *General Red Tape*, but here I call it the Organizational Red Tape Scale. The measure has appeared in a number of public administration surveys including NASP II (Pandey and Kingsley 2000), NASP III (Feeney 2008), a survey administered to the Georgia Department of Transportation managers and their contractors (Feeney and Bozeman 2009), a survey of local managers (Feeney and DeHart-Davis 2009), and the English Local Government Dataset study of Best Value (Brewer and Walker 2010a, 2010b).

The Organizational Red Tape Scale is a staple measure in the empirical red tape research and has been used in more than 20 peer-reviewed journal articles (Bozeman and Feeney 2011). Research using the Organizational Red Tape Scale has found that public sector managers perceive significantly more organizational red tape than those in the private and nonprofit sectors (Feeney and Bozeman 2009; Feeney and Rainey 2010; Rainey, Pandey, and Bozeman 1995). Research has also shown that Organizational Red Tape is related to work alienation, organizational size, respondent education level, and time in current position (DeHart-Davis and Pandey 2005; Pandey and Kingsley 2000). Variance in perceptions of Organizational Red Tape is related to public service motivation (Moynihan and Pandey 2007), hierarchical position (Brewer, Hicklin, and Walker 2006), risk taking (Bozeman and Kingsley 1998), communication, intersector collaboration, and work experience (Feeney and Bozeman 2009). Given these findings and the common use of this scale

in multiple surveys, it is surprising that researchers have not tested the questionnaire item itself, investigating the ways in which the question wording for the Organizational Red Tape Scale may or may not influence responses.

Wright, Manigault, and Black (2004) argue that public administration researchers need to be much more concerned with measurement issues and many red tape researchers are in agreement (Feeney et al. 2010). Although Bozeman and Feeney (2011) assert that research using the Organizational Red Tape Scale has shown results that are "relatively stable, providing a considerable degree of convergent validity" (p. 85) and that there is some face validity and instrumental utility of this measure, there is no research aimed directly at testing the wording of this common red tape measure. A number of questions about this measure remain. For example, do respondents understand the difference between red tape (a negative phenomenon) and rules in general? When thinking about red tape are respondents concerned with efficiency and performance or other types of organizational values? Does the definition provided in the questionnaire item influence the ways in which respondents rate red tape in their organizations?

## THE DATA

This analysis uses data from a Web survey conducted by the Science, Technology and Environmental Policy Laboratory at the University of Illinois at Chicago and supported by the Institute of Policy and Civic Engagement (IPCE). The survey was administered to government managers in 500 local governments with citizen populations ranging from 25,000 to 250,000. Because larger cities often have greater financial and technical capacity for e-government, all 184 cities with a population over 100,000 were selected, whereas a proportionate random sample of 316 out of 1,002 communities was drawn from cities with populations under 100,000. Because I want the data to be a representative sample of cities with results that are generalizable, I weighted the responses based on the probability of selection, ensuring that responses from larger cities do not over influence the results.[1] For each city, lead managers were identified in each of the following five departments: general city management, community development, finance, the police, and parks and recreation. A total of 2,500 local government managers were invited to take part in the survey. The survey began on August 2, 2010, and closed on October 11, 2010. Survey participants were sent an alert letter by US Postal Service, an e-mail invitation that included an individual username and password, five reminder emails, and two postcards inviting individuals to participate. A total of 902 responses were received for a final response rate of 37.9%.[2]

## MEASUREMENT EXPERIMENT AND METHOD

I designed the survey to randomly test three variations of the original Organizational Red Tape questionnaire item. The four items had identical response categories, asking

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[1]    Weights for the data were calculated based on respondent city size, correcting for the sampling frame bias. I used the percentage of individuals per city grouping in the population and the percentage of individuals from those cities in the sample to calculate weights that ranged from 0.42 (largest cities) to 1.34 (smallest cities). Using the original weights resulted in a sample size larger than 902, the original sample size. Because the weights might decrease SEs and increase *t* value in regression analysis, I adjusted the weights to equal the completed sample size, multiplying the weights by (902/2,215.25). Results for the weighted and unweighted analysis are similar.

[2]    The population size was reduced to 2,380 after removing bad addresses and individuals who were no longer working in the position.

respondents to rate the level of organizational red tape on a scale of 0 (Almost no red tape) to 10 (Great deal of red tape). I label the items: Original Red Tape, Rules Red Tape, Other Outcomes Red Tape, and No Definition Red Tape (see table 1). The Original Red Tape item uses the definition that first appeared in Rainey, Pandey, and Bozeman (1995).

Researchers have raised questions about whether or not the definition provided in the Original Red Tape scale narrows the respondent's conceptualization of organizational red tape from rules in general to red tape in particular. The Original Red Tape scale defines red tape as rules that negatively affect effectiveness, as compared to rules in general or negative effects on other outcomes. However, it is not clear that respondents would differentiate between rules and red tape if they are not given a definition of red tape. Thus, I test an item, Rules Red Tape, which asks respondents to think about burdensome administrative rules and procedures that have negative effects on the organization's effectiveness and then assess the level of organizational red tape. Rules Red Tape does not provide the respondent with a formal definition of red tape but rather asks the respondent to think about burdensome rules and procedures that negatively affect the organization.

A second criticism of the red tape research is that because it has relied on Bozeman's (2000) original definition of red tape and Rainey, Pandey, and Bozeman (1995) original questionnaire item, it has overemphasized organizational effectiveness as a negative outcome of red tape, while failing to account for other important public administration values, such as accountability, transparency, equity, and fairness (Feeney et al. 2010). Many red tape researchers note that red tape has multiple dimensions and that this focus on effectiveness limits red tape to only one dimension (Brewer and Walker 2010a; Pandey, Coursey, and Moynihan 2007; Pandey and Scott 2002). For example, Pandey et al. (2007) examined red tape in multiple management systems, specifying red tape as it relates to procurement, budgeting, personnel, and information services. Moreover, although red tape researchers have repeatedly called for the development of a multidimensional concept and definition of red tape that would enable researchers to broaden the study of red tape

**Table 1**
Red Tape Measures

Original Red Tape Measure

If red tape is defined as "burdensome administrative rules and procedures that have negative effects on the organization's effectiveness," how would you assess the level of red tape in your organization?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|

Almost no red tape · Great deal of red tape

Rules Red Tape Measure

Thinking about the burdensome administrative rules and procedures that have negative effects on the organization's effectiveness, how would you assess the level of red tape in your organization?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|

Almost no red tape · Great deal of red tape

Other Outcomes Red Tape Measure

If red tape is defined as "burdensome administrative rules and procedures that have negative effects on accountability, transparency, equity, and fairness," how would you assess the level of red tape in your organization?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|

Almost no red tape · Great deal of red tape

No Definition Red Tape Measure

On a scale of 0 (Almost no red tape) to 10 (Great deal of red tape), how would you assess the level of red tape in your organization?

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|

Almost no red tape · Great deal of red tape

(Brewer and Walker 2010a; Bozeman and Feeney 2011), red tape researchers continue to use this global measure that does not clearly account for other administrative values such as fairness and equity. In fact, there is no empirical red tape research utilizing questionnaire items that guide research subjects to conceptualize these multiple values components of red tape. Thus, I develop the Other Outcomes Red Tape measure, which defines red tape as having negative effects on accountability, transparency, equity, and fairness.

Finally, because the provision of the red tape definition may be guiding respondents to a specific definition of organizational red tape, it is important to test whether or not the definition has any influence as compared to no definition. The No Definition Red Tape measure provides no definition of red tape but simply asks the respondent to assess the level of red tape in the organization, relying solely on the respondent's interpretation of the term red tape. Table 1 notes the exact text of the Original Red Tape item and the three variations: Rules Red Tape, Other Outcomes Red Tape, and No Definition Red Tape.

## Linguistic Difficulty of Red Tape Items

One of the important variations in the four organizational red tape questionnaire items is linguistic difficulty, which can be described in terms of spoken or written language, reading ease (Flesch 1948), and questionnaire design (Holbrook et al. 2007). The linguistic difficulty of questionnaire items can be assessed based on syllabic length, specialized application, sentence length, qualifying words, adverbial and prepositional phrases, and conceptual difficulty (May 1987). In a recent study, Holbrook and colleagues (2007) assessed question comprehension difficulty using three indicators: (1) the number of sentences in the question, (2) the number of words per sentence, and (3) the number of letters per word. They note that the number of sentences is "an indicator of the number of ideas or thoughts that respondents had to remember when considering their response to the question, an aspect of difficulty not typically considered in readability indices" (Holbrook et al. 2007, 331).

The number of words per sentence is one of the most widely used indicators of text difficulty (Bormuth 1968; Flesch 1948). The Other Outcomes Red Tape measure is the longest with 33 words, whereas the No Definition and Rules Red Tape items both have 28 words. Additionally, long words can slow processing as compared to shorter words (May 1987). The No Definition Red Tape item has the lowest average syllabic length of 1.25 syllables per word, as compared to 1.93 in the Rules Red Tape measure. Thus, although the No Definition and Rules Red Tape items are equally brief, the Rules Red Tape item may require more linguistic processing. Third, the number of letters per word is commonly used to assess the readability of items (Bormuth 1968; Greenfield 2003). The Other Outcomes Red Tape item has the highest number of letters, at 182, but the Rules Red tape item has the highest number of letters per word, averaging 5.86. The No Definition Red Tape item has the lowest level of linguistic difficulty as measured by words per sentence, syllables per word, and letters per word (3.57 letters per word).

May (1987) also notes that linguistic difficulty can be related to specialized or scientific language, qualifying words (big old, many few), adverbial and prepositional phrases (e.g., with, beneath), and conceptual difficulty (abstract language, hypotheticals). The four red tape items use between two and five words that have specialized application. For example, effectiveness, transparency, accountability, fairness, red tape (when not accompanied by a definition), and administrative rules might have meanings particular to public

administrators. Although the four items show some variation in the presence of specialized language, qualifying words, and prepositional phrases, because this survey was administered to a sample of public managers, it is unlikely that these local government managers are unfamiliar with terms such as transparency and accountability. Moreover, since 94% of the respondents in this sample have a college education, I would expect that they are not significantly affected by the readability of prepositional phrases and qualifying words.

Finally, there is variation in the conceptual difficulty. In this case, some of the words are abstract and can have multiple meanings. For example, individual readers are left to determine for themselves what is meant by "burdensome," "negative effects," "fairness," "equity," and in some cases "red tape." The use of these abstract terms increases the likelihood of differential interpretation of meaning. The No Definition Red Tape item has only two words that might increase conceptual difficulty, whereas the Other Outcomes Red Tape item has eight. It is possible that variation in the responses to these items is driven by variation in the interpretation of these terms. In summary, No Definition Red Tape has the lowest linguistic difficulty measured as words per sentence, syllables per word, letters per word, and conceptual difficulty. The Rules Red Tape item has the highest linguistic difficulty as related to syllabic length and word length. The Rules Red Tape and Other Outcomes Red Tape items have the highest number of words that might contribute to conceptual difficulty.

### Random Assignment of Red Tape Items

Each respondent was randomly assigned one of the four red tape items when they logged into the survey. Of the 902 respondents to the survey, 863 completed the red tape items.[3] The Original Red Tape item had the fewest respondents ($n = 205$) and the most respondents completed the Rules Red Tape item ($n = 228$). The mean response varied from 4.40 for the Other Outcomes Red Tape measure and 5.36 for the No Definition Red Tape measure (see table 2).

To ensure that the four red tape items were administered randomly across the sample, I compared each of the items by the following sample characteristics: city size, department, gender, education, race, age, and time working in the city. Within each city size, there is a relatively stable distribution of responses per red tape item, 23%–27% of individuals in the smallest cities completed each red tape item. Between 21% and 30% of respondents from each department type responded to each red tape item. About one quarter of the women, men, MPA holders, and white respondents answered each item. Comparison of means tests indicate that there are no significant differences across the groups who responded to the four red tape items based on city size, department type, gender, education, race, age, or time working in the city.

### VARIABLES

The empirical red tape literature indicates that the following individual and organizational characteristics and factors are significantly related to perceptions of red tape: job tenure, job satisfaction, public service motivation, organizational commitment, personnel flexibility,

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3    Not all 902 respondents made it through the entire survey. Respondents who skipped the red tape items or did not complete the final pages of the survey are still included in the overall study. The present analysis focuses on the 863 who completed the red tape section.

**Table 2**
Descriptive Statistics

| | N | Mean | SD | Minimum | Maximum | SE Mean |
|---|---|---|---|---|---|---|
| Red Tape Items | | | | | | |
| Original Red Tape | 205 | 4.84 | 2.103 | 0 | 10 | 0.143 |
| Rules Red Tape | 228 | 5.11 | 2.154 | 0 | 10 | 0.141 |
| Other Outcomes Red Tape | 210 | 4.40 | 2.296 | 0 | 10 | 0.157 |
| No Definition Red Tape | 220 | 5.36 | 2.294 | 0 | 10 | 0.150 |
| Managerial Perceptions | | | | | | |
| PSM | 829 | 14.07 | 3.81 | 7 | 24 | |
| Job Satisfaction | 845 | 4.26 | 0.77 | 1 | 5 | |
| Centralization | 839 | 6.97 | 2.23 | 3 | 15 | |
| Personnel Flexibility | 850 | 4.68 | 1.98 | 2 | 10 | |
| Controls | | | | | | |
| Population 25,000–49,999 | 902 | 0.50 | 0.50 | 0 | 1 | |
| Population 50,000–99,999 | 902 | 0.36 | 0.48 | 0 | 1 | |
| Population 100,000–149,999 | 902 | 0.08 | 0.28 | 0 | 1 | |
| Population 150,000–199,999 | 902 | 0.03 | 0.18 | 0 | 1 | |
| Population 200,000–250,000 | 902 | 0.02 | 0.14 | 0 | 1 | |
| Mayor's Office or City Manager | 902 | 0.15 | 0.36 | 0 | 1 | |
| Community Development Department | 902 | 0.23 | 0.42 | 0 | 1 | |
| Finance Department | 902 | 0.17 | 0.38 | 0 | 1 | |
| Parks and Recreation Department | 902 | 0.23 | 0.42 | 0 | 1 | |
| Police Department | 902 | 0.21 | 0.41 | 0 | 1 | |
| Organization Size (ln) | 820 | 3.51 | 1.55 | 0 | 8.07 | |
| Female | 897 | 0.23 | 0.42 | 0 | 1 | |
| Age | 803 | 50.96 | 8.52 | 25 | 75 | |
| White | 860 | 0.85 | 0.36 | 0 | 1 | |
| MPA | 860 | 0.27 | 0.44 | 0 | 1 | |
| MBA | 860 | 0.08 | 0.27 | 0 | 1 | |
| Job Tenure | 842 | 13.95 | 10.59 | 0 | 44 | |

*Note:* Data are weighted to reflect the sampling procedure. PSM, Public Service Motivation.

sector, and age (DeHart-Davis and Pandey 2005; Feeney and Bozeman 2009; Feeney and Rainey 2010; Moynihan and Pandey 2007; Pandey et al. 2007; Pandey and Kingsley 2000; Pandey and Rainey 2006; Rainey, Pandey, and Bozeman 1995). The present analysis investigates the ways in which the four red tape items are related to the following individual managerial perceptions: public service motivation, job satisfaction, centralization, and personnel flexibility and the following organizational and individual characteristics: city size, department type /function, organizational size, respondent gender, age, race, education level, and job tenure. Specifically, I am interested in determining whether these concepts and measures are differently related to the four red tape items under study.

**Managerial Perceptions**

"Public Service Motivation" is the sum of responses to seven items from Perry's (1996) original scale (see below). The survey had included 10 items from Perry's (1996) original measures of Civic Duty and Commitment to the Public Interest constructs, but a factor analysis indicated that only seven of the items loaded together (Eigenvalue 3.534; % variance explained 50.485). A scale reliability test indicates that these seven items have a Cronbach's alpha of .831.

1. I consider public service my civic duty.

2. I unselfishly contribute to my community.

3. I am willing to go to great lengths to fulfill my obligations to my country.

4. I believe everyone has a moral commitment to civic affairs no matter how busy they are.

5. It is my responsibility to help solve problems arising from interdependencies among people.

6. Meaningful public service is very important to me.

7. Public service is one of the highest forms of citizenship.

"Job Satisfaction" is measured on a five-point agreement scale (1 = strongly disagree; 5 = strongly agree) to the following item "All in all, I am satisfied with my job." "Centralization" is a summative scale comprised of the following three items which are adapted from Aiken and Hage (1966): (1) There can be little action taken here until a supervisor approves a decision; (2) in general, a person who wants to make his own decisions would be quickly discouraged in this agency; and (3) even small matters have to be referred to someone higher up for a final answer. A higher score on the Centralization scale indicates higher perceived centralization. The Cronbach's alpha for the Centralization scale is .750. "Personnel Flexibility" is captured by summing the 5-point agreement scale responses to two survey items: (1) The formal pay structures and rules make it hard to reward a good employee with higher pay here and (2) even if a manager is a poor performer, formal rules make it hard to remove him or her from the organization. The item ranges from 1 (low flexibility) to 10 (high flexibility). Although the Cronbach's alpha for Personnel Flexibility is relatively low, at .652, these items are commonly used in the red tape and public administration research to measure personnel and human resources constraints (Brewer and Walker 2010a, 2010b; Feeney and Rainey 2010; Rainey 1983; Rainey, Pandey, and Bozeman 1995) and are therefore retained in this study since they are an important measure in the literature.

### Controls

City size is measured using five dummy variables indicating city population: 25,000–49,999, 50,000–99,999, 100,000–149,999, 150,000–199,999, and 200,000–250,000. Department is captured with five dummy variables: "Mayor's Office," "Community Development," "Finance Department," "Parks and Recreation," and "Police." "Organizational size" is the natural log of a continuous variable indicating the number of full time employees in the respondent's organization. "Female" is coded one if the respondent is female, zero if male. "Age" is a continuous variable. "White" is coded one if the respondent is white and zero if not. Education is captured with two measures: "MPA" is coded one if the respondent has a master's degree in public administration, public policy, or public service and "MBA" is coded one if the respondent has a MBA. "Job Tenure" is a continuous variable indicating the number of years that the respondent has worked for the city.

Because this analysis relies on data from a single survey, I tested for common method variance (CMV) with a Harman one-factor analysis and confirmatory factor analysis with post hoc statistical tests. Neither the Harman one-factor analysis nor the principal component analysis with varimax rotation resulted in a single factor from the factor analysis or one

general factor accounting for the majority of the covariance among the variables, which are both indicators of CMV (Podsakoff and Organ 1986; Podsakoff et al. 2003). I have also reduced the threat of CMV by using data from external sources (city population and department function). Finally, I ran partial correlation tests between the independent variables and each of the dependent variables (another method for testing for CMV, Chang, Witteloostuijin, and Eden 2010). None of the variables have a partial correlation over .300. Descriptive statistics are in table 2.

## ANALYSIS

The analysis is presented in two parts. First, using a one-sample *t*-test, I investigate the ways in which the mean responses to the three alternative red tape items vary from the mean responses to the Original Red Tape item. Second, I use OLS regression to predict red tape perceptions in the full sample, focusing on whether the red tape items differently predict organizational red tape perceptions and investigate the relationships between managerial perceptions and organizational and individual characteristics and each of the four red tape items.

The one-sample *t*-test enables us to test whether the sample mean significantly differs from a hypothesized value. In this case, because I am interested in testing if responses to the Rules, Other Outcomes, and No Definition Red Tape measures vary significantly from the Original Red Tape scale, I use the mean response from Original Red Tape (4.84) as the test value. The one-sample *t*-test presented in table 3 indicates that the mean responses for two of the items are significantly different ($p < .01$) from the test value (the mean response to Original Red Tape). Local government managers who responded to the Other Outcomes Red Tape reported a mean value significantly lower than responses to the Original Red Tape item and those who responded to the No Definition Red Tape item reported organizational red tape levels that are significantly higher. In comparison, responses to the Rules Red Tape item did not significantly differ from the mean response values to the Original Red Tape item.

The one-sample *t*-test indicates that in comparison to the Original Red Tape item, respondents indicated significantly different mean levels of organizational red tape when responding to the Other Outcomes Red Tape and No Definition Red Tape items. Thus, respondents, when guided by varying definitions, are responding in significantly different

**Table 3**
One-Sample *t*-Test of Red Tape Items

| | | | | | Test Value = 4.84[a] | |
|---|---|---|---|---|---|---|
| | *t* | df | Significance (two tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| Rules Red Tape | 1.851 | 224 | .066 | .266 | −.02 | .55 |
| Other Outcomes Red Tape | −2.744 | 206 | .007 | −.438 | −.75 | −.12 |
| No Definition Red Tape | 3.404 | 225 | .001 | .520 | .22 | .82 |

*Note:* Data are weighted to reflect the sampling procedure.
[a]Test value is mean value for Original Red Tape item.

ways. Specifically, when asked to rate the level of organizational red tape as it relates to organizational accountability, transparency, equity, and fairness, respondents indicate a significantly lower level of organizational red tape than when asked about red tape as related to organizational effectiveness. When given no definition of red tape, respondents rate organizational red tape, on average, higher than when asked about organizational effectiveness in particular. Thus, it appears that the definition provided in the questionnaire item is accountable for some level of variation in organizational red tape ratings.

### Regression Models

The first regression model, presented in table 4, predicts organizational red tape perceptions for the full sample. The primary independent variables of interest in this model are the randomly assigned red tape items. Table 4 indicates that respondents who completed the Rules Red Tape and Other Outcomes Red Tape do not have significantly different perceptions of organizational red tape, as compared to Original Red Tape (the reference category). This finding is in contrast to the *t*-test, which found significant differences in the

**Table 4**
OLS Regression Model Predicting Red Tape Perceptions

|  | $B$ | SE | Significance |
|---|---|---|---|
| Constant | 6.376 | 0.995 | |
| Rules Red Tape | 0.273 | 0.220 | |
| Other Outcomes Red Tape | −0.341 | 0.221 | |
| No Definition Red Tape | 0.569 | 0.218 | ** |
| PSM | −0.025 | 0.022 | |
| Job Satisfaction | −0.440 | 0.111 | *** |
| Centralization | 0.238 | 0.037 | *** |
| Personnel Flexibility | −0.171 | 0.042 | *** |
| Population 50,000–99,999 | 0.128 | 0.172 | |
| Population 100,000–149,999 | 0.236 | 0.305 | |
| Population 150,000–199,999 | 0.008 | 0.484 | |
| Population 200,000–250,000 | 0.013 | 0.567 | |
| Community Development Department | 0.206 | 0.282 | |
| Finance Department | 0.102 | 0.306 | |
| Parks and Recreation Department | 0.236 | 0.272 | |
| Police Department | −0.170 | 0.297 | |
| Organization Size (ln) | 0.138 | 0.067 | * |
| Female | 0.089 | 0.193 | |
| Age | 0.019 | 0.010 | |
| White | −0.587 | 0.243 | * |
| MPA | −0.269 | 0.192 | |
| MBA | −0.468 | 0.311 | |
| Job Tenure | −0.018 | 0.009 | * |
| $R$ | 0.422 | | |
| $R^2$ | 0.178 | | |
| Adjusted $R^2$ | 0.153 | | |

*Note:* Reference categories: Original Red Tape Scale; population 25,000–49,999; Mayors Office or City Manager.
Data are weighted to reflect the sampling procedure. PSM, Public Service Motivation.
*$p < .05$, **$p < .01$, ***$p < .001$.

mean responses for Other Outcomes Red Tape and Original Red Tape items. Respondents who completed the No Definition Red Tape item report significantly higher levels of perceived red tape as compare to those who completed the Original Red Tape item.

Table 5 shows four regression models using the same independent variables to predict each of the red tape items. These models show variation in the determinants of the four red tape items. As noted in table 5, the model fit statistics are somewhat similar across the models, with the adjusted $R^2$ ranging from 0.137 in the Original Red Tape model to 0.187 in the Other Outcomes Red Tape model. Overall, the variables in the model explain about 19% of the variance in the Rules Red Tape item and 16% of the variance in the No Definition Red Tape item.

Considering the sign and significance across the four models, only four control variables in the models (MBA, job tenure, job satisfaction, centralization) have a consistent positive or negative relationship with the four dependent variables. Other control variables, such as population, age, education, job tenure, and police, community development, and finance departments have a consistent null finding across the four items. Organizational Size is positively related to reporting higher levels of Other Outcomes Red Tape. Whites, as compared to nonwhites, report significantly lower levels of Other Outcomes Red Tape and women report higher levels of No Definition Red Tape, as compared to men. Among the managerial perception items, centralization is a positive significant predictor of each of the four red tape items. Personnel Flexibility is negatively related to the Original Red Tape, Rules Red Tape, and Other Outcomes Red Tape items but is not significantly related to the No Definition Red Tape item. In comparison, the Public Service Motivation measure is negatively significantly related to the No Definition Red Tape item but not the other three items. Job Satisfaction is negatively related to three of the four items.

Overall, the models predicting Original Red Tape and Rules Red Tape are the most similar. As with the full-sample model in table 4, both models indicate that perceived red tape is related to managerial perceptions of centralization and personnel flexibility. Additionally, perceived red tape is negatively related to job satisfaction. The similarity between predictors of Original Red Tape and Rules Red Tape reinforce the findings from the one-sample *t*-test, which indicate that the mean responses to the Original Red Tape and Rules Red Tape items are not significantly different. The Original Red Tape and Rules Red Tape items do not lead to significantly different ratings of perceived organizational red tape, and the predictors of these two items are relatively consistent. The similarities between responses to these items are most likely explained by the similarities in the definitions provided in the text of the questionnaire items and the inclusion of the term "red tape." Additionally, as discussed earlier, some of these similarities might be explained by the linguistic similarity of these two items.

The Other Outcomes Red Tape model differs from the other regression models. When respondents are asked to assess the organization's level of red tape after being provided with a definition of red tape as "burdensome administrative rules and procedures that have negative effects on accountability, transparency, equity, and fairness," their responses are significantly related to working in the Parks and Recreation Department (as compared to the mayor's office), organizational size, race, and the following managerial perceptions: job satisfaction, centralization, and personnel flexibility. Specifically, when presented with the Other Outcomes Red Tape item, white respondents report significantly lower levels of organizational red tape, as compared to nonwhites. Moreover, increased organizational size is

**Table 5**
OLS Regression Models for Four Red Tape Items

| | Original, Red Tape | | | Rules, Red Tape | | | Other Outcomes, Red Tape | | | No Definition, Red Tape | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B | SE | Significance | B | SE | Significance | B | SE | Significance | B | SE | Significance |
| Constant | 2.853 | 2.026 | | 6.102 | 1.800 | | 6.294 | 2.076 | | 5.982 | 2.041 | |
| PSM | −.017 | .046 | | .038 | .042 | | .024 | .047 | | −.111 | .044 | * |
| Job Satisfaction | −.059 | .243 | | −.452 | .201 | * | −.533 | .225 | * | −.608 | .238 | * |
| Centralization | .255 | .072 | *** | .223 | .076 | ** | .200 | .074 | ** | .318 | .075 | *** |
| Personnel Flexibility | −.267 | .076 | *** | −.233 | .085 | ** | −.250 | .091 | ** | .021 | .085 | |
| Population 50,000–99,999 | .387 | .318 | | .157 | .337 | | −.101 | .374 | | .232 | .348 | |
| Population 100,000–149,999 | −.038 | .661 | | .857 | .570 | | −.512 | .597 | | .348 | .589 | |
| Population 150,000–199,999 | .816 | .788 | | −.275 | .854 | | −.635 | 1.013 | | −.295 | 1.433 | |
| Population 200,000–250,000 | .463 | 1.138 | | 1.371 | 1.151 | | −.905 | 1.082 | | −.335 | 1.155 | |
| Community Development Department | −.214 | .561 | | −.208 | .542 | | .569 | .621 | | .866 | .550 | |
| Finance Department | −.166 | .653 | | −.250 | .568 | | .953 | .609 | | .413 | .623 | |
| Parks and Recreation Department | .591 | .542 | | −.777 | .536 | | 1.163 | .581 | * | .441 | .520 | |
| Police Department | −.328 | .602 | | −.553 | .544 | | −.224 | .599 | | .792 | .625 | |
| Organization Size (ln) | .033 | .126 | | −.133 | .130 | | .559 | .148 | *** | .134 | .133 | |
| Female | .277 | .362 | | −.607 | .362 | | −.487 | .432 | | .916 | .408 | * |
| Age | .035 | .020 | | .029 | .018 | | −.013 | .021 | | .015 | .022 | |
| White | .038 | .449 | | −.451 | .470 | | −1.574 | .474 | *** | −.331 | .571 | |
| MPA | .366 | .376 | | .044 | .367 | | −.667 | .414 | | −.656 | .392 | |
| MBA | −.251 | .649 | | −1.245 | .701 | | −.796 | .570 | | −.449 | .653 | |
| Job Tenure | −.023 | .016 | | −.019 | .017 | | −.010 | .018 | | −.024 | .019 | |
| R | .475 | | | .517 | | | .520 | | | 0.487 | | |
| $R^2$ | .226 | | | .267 | | | .270 | | | 0.237 | | |
| Adjusted $R^2$ | .137 | | | .185 | | | .187 | | | .156 | | |

*Note:* Reference categories: Population 25,000–49,999; Mayors Office or City Manager.
Data are weighted to reflect the sampling procedure. PSM, Public Service Motivation.
*$p < .05$, **$p < .01$, ***$p < .001$.

positively related to reporting higher Other Outcomes Red Tape indicating that organizational context matters for perceptions of red tape related to these values. It is possible that these responses indicate that nonwhites perceive more rules that negatively affect values such as accountability, transparency, equity, and fairness and that respondents working in larger organizations see more constraints in achieving these outcomes. The findings related to Other Outcomes Red Tape indicate some empirical support for the assertion that defining red tape solely on effectiveness (as it is traditionally done in the literature) might be leading respondents to ignore other important negative outcomes of red tape.

The model predicting the No Definition Red Tape item is different from the other models. Specifically, women, as compared to men, report significantly higher levels of red tape in response to the No Definition Red Tape ($p < .05$). Interestingly, when asked about perceived red tape with no definition, perceptions of personnel flexibility are not significantly related to red tape perceptions, though it is negative and significant in the three other models. It is surprising that perceptions of personnel flexibility (elsewhere called human resources red tape, Pandey and Kingsley 2000) are not significantly related to No Definition Red Tape. It is possible that because red tape is undefined in this item, respondents do not link the two concepts. It is also possible that respondents, when asked to note the level of organizational red tape, are not thinking about personnel issues but other types of red tape such as service delivery, contracting, or purchasing red tape. It is also possible that because no definition is provided, respondents are conceptualizing red tape broadly, including rules in general, certain types of rules, and bad rules specifically.

Finally, because the term "red tape" carries strong negative connotations for public managers, it is possible that because there is no definition clarifying what is meant by red tape, respondents are considering all the negative attributes of this term. As noted earlier, the mean response to the No Definition Red Tape item was significantly higher ($p < .001$) than the mean response to the Original Red Tape item and the full-sample regression model found that respondents who were assigned the No Definition item reported significantly higher levels of perceived red tape than those who were assigned the original item. It is possible that respondents report higher levels of red tape when no definition is provided because they are conceptualizing a broader definition of red tape and relying on negative connotations of red tape, which are not mitigated by the provision of a specific definition. This finding points to the critical importance of clearly defining and bounding a concept when soliciting respondent perceptions of red tape.

## CONCLUSIONS

This research makes an important contribution to red tape research, providing empirical evidence that the question wording and the definitions provided in the red tape questionnaire items influence respondents' assessments of organizational red tape—though I am unable to say whether these are interaction, mediating, direct, or delayed effects. When given no definition, respondents report significantly higher levels of red tape than when guided by the original definition. Additionally, the relationships between the independent variables and the red tape items vary significantly. For example, when no definition is provided, respondents report higher levels of red tape, probably because they are conceptualizing a broader definition of red tape and are not required to evaluate vague words and terms. It makes sense that the items that provide a red tape definition and specify outcomes, be it based on efficiency, effectiveness, fairness, or equity, will add clarity and specificity to the item and

therefore narrow the respondent's conceptualization of red tape. A second explanation is that the term "red tape" elicits strong negative connotations among public sector respondents. Future red tape measures should eliminate the term "red tape" in the question wording and instead ask about rules that have negative outcomes or do not achieve their functional object.

Second, among the four items tested, I find the greatest similarities between the Original Red Tape and Rules Red Tape items. This similarity is most likely explained by the linguistic similarity of the definitions provided in the items. However, despite these similarities, there are still important differences, for example, the Rules Red Tape item seems to inflate the estimate of red tape, as compared to the Original Red Tape item. Third, the one-sample $t$-test indicates that mean responses to the No Definition and Other Outcomes Red Tape items are significantly different from the Original Red Tape item. The full-sample OLS model indicates that responses to the No Definition Red Tape are significantly different from responses to the Original Red Tape item. Although this research finds significant differences between the original organizational red tape scale and the Other Outcomes and No Definition red tape items, there are certainly other variations on the questionnaire item that might be important for understanding how respondents conceptualizes red tape. Red tape researchers will need to carefully consider how they define red tape on future surveys.

Fourth, I find that perceived red tape, as reported in response to the Other Outcomes Red Tape, varies significantly from responses to the Original Red Tape item. When asked to assess Red Tape as related to Other Outcomes such as fairness, accountability, and transparency, respondents report a significantly lower mean level of organizational red tape. Additionally, the predictors for Other Outcomes Red Tape differ from the predictors of the Original Red Tape scale. It is possible that red tape, when defined as negatively affecting these other outcomes, is simply lower than red tape as related to organizational effectiveness. For public sector respondents, it might be hard to think of rules that have negative affects on fairness, accountability, and transparency since many of the rules public managers encounter are aimed at increasing fairness, accountability, and transparency. It is surely conceivable that there are much lower levels of red tape associated with these other outcomes, as compared to red tape related to effectiveness. Defining red tape solely on effectiveness might be leading respondents to ignore other important outcomes of red tape, such as accountability, transparency, equity, and fairness. Future research might consider separating these outcomes into individual questions in order to understand red tape as related to each value.

Most important, this article provides indirect empirical evidence that ratings of perceived organizational red tape, in response to the commonly used organizational red tape measure, are influenced by the definition provided in the questionnaire item. Specifically, when asked about red tape that results in negative effects on accountability, transparency, equity, and fairness, respondents are indicating different mean levels of organizational red tape, and when provided no definition, respondents report higher levels of perceived red tape. This research does not enable me to clearly understand the reasons for these differences, but I suspect that this variation is due to the multidimensional nature of red tape, the multiple outcomes and missions of public organizations, negative connotations associated with the term "red tape," and the linguistic difficulty of these items—in particular, the conceptual difficulty associated with terms such as accountability and transparency and the effects of narrowing definitions as compared to providing not definitions. Because I did not observe the respondents completing these items, I cannot know the exact linguistic difficulty associated with these items or the amount of time it took for respondents to

complete each red tape item, which might indicate a lack of conceptual clarity. Second, I did not conduct qualitative analysis or follow-up with respondents to ask them how they processed or understood the terms. Future research should ask respondents to indicate how they interpret and define red tape and to possibly give examples of red tape, so that researchers can determine whether or not respondents are conceptualizing red tape in consistent ways.

Although this research relies on a single measurement experiment that was administered to sample of local government managers, requiring care when generalizing these findings to other types of managers (e.g., in the private sector) or employees working at other levels of government, I conclude that a global measure for organizational red tape must specifically define red tape, as compared to general rules, eliminate the term "red tape" from the definition, limit the conceptual difficulty of the words used in that definition, and clearly articulate the red tape outcomes being considered. The findings here indicate that researchers should eliminate the term "red tape" when using an organizational red tape measure. Eliminating the term "red tape" will reduce the capture of general negative connotations with the term and instead focus respondent attention on red tape as defined by the researchers. Additionally, a global measure of organizational red tape must specify the outcome of red tape, or researchers should include multiple measures for different types of outcomes (e.g., effectiveness, fairness, accountability, etc.). Any definition of red tape must clearly specify the negative outcomes to which the researcher is referring. Is red tape described as negatively affecting the functional object, organizational effectiveness, or other outcomes such as fairness? It is quite possible that using a global measure such as the original Organizational Red Tape scale, while serving some purposes, does not fully capture the multidimensional nature of red tape and its outcomes.

This research is one step in developing a more rigorous approach to understanding a questionnaire item commonly used in public administration red tape research. I hope that future research can continue this line of inquiry, using other types of research methods (e.g., interviews, focus groups) to assess and develop the best measures for capturing complex concepts. Additionally, I hope that this measurement experiment will inspire additional investigations into language usage in public administration questionnaires and hopefully more in-depth qualitative assessments of how individuals conceptualize, process, and respond to the text of these items.

## FUNDING

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