

Red tape, organizational performance and employee outcomes: meta-analysis, meta-regression and research agenda

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Abstract

Although there is consensus among scholars that red tape has negative consequences, there is a lack of synthesis on these negative effects. We conduct a meta-analysis and meta-regression of public administration evidence and ask: What is the impact of red tape on organizational performance and employee outcomes, and which conditions moderate this impact? Our meta-analysis finds that red tape has a significant, negative and small-to-medium impact on both organizational performance and employee outcomes. Meta-regression shows that red tape imposed by the organization itself is more harmful than red tape imposed by external parties. Moreover, red tape's negative impact remains quite stable across sectors, administrative traditions, and research methods. In conclusion, an agenda for future public administration research on red tape is presented. We recommend that future research syntheses on red tape include research on concepts that bear a family resemblance (e.g., sludge, administrative burden) and also encourage analyses of differing discourses to identify common themes.

Evidence for practice

- This research synthesis suggests that investing effort in reducing red tape is worthwhile because – on average – red tape has a significant, negative and small-to-medium impact on both organizational performance and employee outcomes.
- Red tape's negative impact is quite stable across sectors and administrative traditions, indicating that its impact is similar across contexts thus making red tape a universal issue as opposed to only a context-specific problem.
- Red tape's negative impact is, however, significantly smaller when red tape is imposed by external parties as opposed to the own organization.
- These findings are important because red tape imposed by one's own organization is – to some extent – within a public manager's control. This form of red tape is not externally imposed but results from the organization's internal rules, regulations and procedures, and can thus be actively managed although reducing it might be challenging.

Until the 1980s, the Weberian bureaucracy – sometimes also labelled as traditional public administration – was the dominant model of how public organizations should be managed and organized (Hughes 2012). At the heart of the Weberian bureaucracy lies the idea that all citizens and civil servants should be treated equal, which thus implies standardized procedures, rules and regulations as focal points (Kaufman 1977; Osborne 2006). This traditional way of managing and organizing public organizations came under attack during the New Public Management (NPM) movement of the 1980s (Hood 1991). Indeed, NPM evangelists considered the Weberian bureaucracy a failed model because government became too big and unsustainable, and the preponderance of rules, regulations and procedures created an overly bureaucratic public sector (Hughes 2012).

The NPM movement, christened reinventing government in America, issued a report in 1993 titled, “From Red tape to Results: Creating a Government that Works Better and Costs Less”. The term “red tape” was used widely worldwide by practitioners who sought to reduce red tape through reforms such as implementing private-sector management practices in government and privatizing the provision of specific public goods and services (Diefenbach 2009; Osborne and Gaebler 1992). As policymakers focused on NPM reforms and targeted red tape in the 1990s, public administration scholars also started engaging head-on with the concept of red tape. Pandey, Pandey, and Van Ryzin (2017, p. 220) offer a clear portrayal of the academic engagement, “... the dominant academic view in public management scholarship regarding bureaucratic red tape as an epiphenomenon and a second-order event began to come apart in the 1990s.”

Nevertheless, despite NPM’s vigorous attack on red tape many scholars argue that NPM – in itself – also created red tape through, for instance, its focus on rational planning and performance measurement by public organizations (e.g., Bovaird 2008; Radin 2006), resulting in a panoply of

performance plans, indicators and dashboards. Moreover, while the Weberian bureaucracy and NPM are often presented as sequential movements, the reality is that contemporary public organizations are multilayer entities incorporating aspects from both NPM and more bureaucratic models of government, as well as more recent post-NPM movements (Hammerschmid et al. 2016; Koppenjan 2012). This multilayer reality thus implies that different types of red tape have, most likely, been building upon each other as opposed to actually replacing one another. In sum, despite its argued negative impact on the public sector as well as several initiatives aimed at reducing it, red tape remains a major threat in many public organizations worldwide (Bozeman and Feeney 2011; Pandey, Pandey, and Van Ryzin 2017).

The theoretical and empirical advancements on red tape (also called “bureaucratic red tape”, as in the *Public Administration Review* symposium edited by Carrigan, Pandey, and Van Ryzin, 2020) have been ably summarized elsewhere (e.g., Bozeman 2000; Bozeman and Feeney 2011; Pandey and Scott 2002; Pandey, Pandey, and Van Ryzin 2017). Campbell (2019) provides a good summation of theoretical developments identifying two distinct approaches, namely the functional efficacy approach and psychological process approach. The functional efficacy approach grows out of Bozeman’s (1993) paper in which he defines 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”. Campbell describes the other approach in the following words, “Psychological process models of red tape (Davis and Pink-Harper, 2016) posit that employee evaluations of rule quality cannot be isolated from the more holistic experience of organizational life, and particularly how closely this experience conforms to expectations (Pandey and Kingsley, 2000; Pandey and Welch, 2005; Scott and Pandey, 2005).” Pandey (forthcoming) provides a psychological process view definition as follows, “Bureaucratic red tape is role-specific

subjective experience of compliance burden imposed by an organization.” The term role-specific recognizes that the reality of bureaucratic red tape is tied to specific roles with respect to the organization (e.g., citizen, customer, legislator, top manager, frontline employee, middle manager).

Although red tape has been at the heart of public administration scholarship as well as a key issue for practitioners worldwide, little research synthesis has been conducted on the topic. While some overviews of red tape research have been published (e.g., Bozeman and Feeney 2011; Pandey and Scott 2002; Pandey et al. 2017), there are few syntheses using meta-analysis and meta-regression methods. This is particularly astonishing when we take into account the current evidence-based policymaking and management era (Rousseau 2006; Sanderson 2002). Indeed, a meta-analysis, or an “analysis of analyses” (Glass 1976), offers a synthesis of empirical evidence on the state-of-the-art of a subject and is of particular value to practitioners (Perry 2012). It is for this reason that meta-analyses are extremely popular in the fields of psychology and medicine (Field and Gillet 2010), and we need to acknowledge that public administration is lagging behind in its adoption of this powerful tool (for notable recent exceptions, see Gerrish 2016; George et al. 2019; Homberg et al. 2015). In other words, while many public administration scholars argue that red tape is negative we have little overarching insight into (a) how bad red tape really is nor (b) the conditions under which red tape is particularly harmful.

This study aims to provide these much-needed insights into the negative impact of red tape by asking: (a) What is the impact of red tape on organizational performance and employee outcomes and (b) which conditions moderate this impact? Employee outcomes are operationalized by looking at typical HRM outcome variables (e.g., job satisfaction, commitment, stress, and burnout) whereas organizational performance is operationalized by looking at typical performance

dimensions (e.g., efficiency, effectiveness, responsiveness, and outcomes). First, a systematic literature review process is conducted to identify the empirical articles on these relationships published in public administration journals classified by the Social Sciences Citations Index (SSCI) of Web-of-Science. Second, two random-effects meta-analyses using Fisher's r -to- Z transformation are employed to identify overall population effect sizes across these articles thus answering research question (a). Third, a random-effects meta-regression model with clustered standard errors at the study level is used to identify potential moderators of the identified effect sizes thus answering research question (b). Importantly, the unit of analysis in this study is each effect size between red tape, organizational performance, and employee outcomes as reported in the included studies. This implies that studies can deliver (and typically will deliver) multiple effect sizes. This is a deliberate choice because it allows the identification of sources of heterogeneity in the effect sizes overall through meta-regression analysis, which is particularly important for meta-analyses in public administration where conceptualizations, contexts, and methods often vary, and population effect sizes thus need to be interpreted carefully and with some nuance. All analyses are done in Stata based on the recommendations of Ringquist (2013).

Our meta-analysis and meta-regression contribute to public administration theory, research and practice in three distinctive ways. First, we introduce meta-analytical evidence into a long-standing debate in public administration scholarship on the detrimental impact of red tape. In doing so, we not only synthesize the state-of-the-art on red tape in public administration but, simultaneously, stipulate future research avenues concerning factors that might mitigate or enforce the negative impact of red tape. Second, context is at the heart of public administration (Pollit 2013, O'Toole Jr and Meier 2015). Through our meta-regression analyses, we elucidate the importance of administrative traditions and the public-private distinction when assessing red tape's

impact, and also acknowledge red tape as a multidimensional construct that has been studied using a variety of methods. Third, recent calls for more meta-analytical evidence in public administration have emerged with the aim of creating an evidence base for practitioners on which practices enhance or inhibit the functioning of public organizations (Perry 2012; Walker and Andrews 2015). We elucidate the impact of one such practice – namely red tape – and thus provide practitioners with an empirical grounding for future evidence-based management and policymaking.

In what follows, we first elaborate on the main effects between red tape, organizational performance and employee outcomes, and present additional conditions that might moderate this effect. Next, we present our methods with details on the meta-analytical procedure. We move on to the presentation of our results, which indicate that red tape has a significant, negative and small-to-medium impact on both organizational performance and employee outcomes. We also find that the negative impact of red tape becomes stronger when red tape is imposed by the organization itself as opposed to by external parties, but does remain quite stable across contexts and methods. In conclusion, we discuss the implications of these findings for public administration theory, research and practice.

Red tape, organizational performance and employee outcomes

Main effects

In this section, we elaborate on the reasoning underlying a potential negative impact of red tape on both organizational performance and employee outcomes. While both outcomes are argued to be negatively affected by red tape, the underlying arguments and literature differ to some extent. Hence, we first discuss the negative impact on organizational performance first and then move on to the negative impact on employee outcomes.

The red tape – organizational performance relationship is one of the most important topics in public administration theory, research and practice (Brewer and Walker 2010). Some scholars have even argued that red tape's impact on organizational performance is one of the most damaging impacts an organization can experience (Brewer and Walker 2010; Rainey 2003; Wilson 1989). Pandey, Coursey, and Moynihan (2007) identify mechanisms through which red tape can influence organizational performance. They argue that red tape has a negative impact on organizational performance, through its effect on management systems in the organizations such as, human resources system, information systems, and procurement systems. These systemic influences can stymie recruitment, retention, and motivation of qualified personnel and make it hard for managers to obtain useful performance information in a timely manner. Several additional empirical studies provide confirmation for this finding about red tape's negative impact on organizational performance (e.g., Brewer and Walker 2010; Van Loon 2017, Walker and Brewer 2009). Brewer and Walker (2010, p. 233) provide an apt and succinct synoptic perspective in noting that "red tape is assumed to make public organizations more arthritic and self-serving, less able to achieve their core missions, and less responsive to overhead political authorities and service users." Hence, based on these arguments as well as empirical studies we can expect red tape to negatively impact organizational performance.

The red tape – employee outcomes relationship is the subject of more recent literature (e.g., Steijn and van der Voet 2019; Van der Voet 2016). Underlying this literature is the assumption that red tape chips away at employee autonomy and leads to feelings of powerlessness (DeHart-Davis and Pandey 2005; Quratulain and Khan 2015). DeHart-Davis and Pandey (2005, p. 135) provide an insight into plausible causal mechanisms linking red tape with employee outcomes: "bureaucratic controls have as much potential to alienate workers as any assembly-line process

[...] controls that seek to reduce worker discretion, such as close supervision or clearly and minutely specified procedures, become a type of automation that is machinelike. Reduced discretion, in turn, may separate the worker from organizational goals by removing participation in production and reducing the meaningfulness of work.” Indeed, a variety of earlier and more recent literature confirms that red tape in the form of procedural constraints that limit employees’ discretion can enhance different forms of alienation – including powerlessness and meaninglessness (e.g., Blauner 1964; Gouldner 1954; Hattke et al. 2020), which, in turn, are detrimental for employee outcomes such as job satisfaction, involvement and commitment to the organization (e.g., Lefkowitz and Brigando 1980; Zeffane and Macdonald 1993). Based on this logic as well as cumulated empirical evidence, we expect red tape to have a negative impact on employee outcomes.

Hence, we conduct two meta-analyses to test these expectations: one focused on public administration evidence concerning the relationship between red tape and organizational performance, and the other focused on public administration evidence concerning the relationship between red tape and employee outcomes.

Moderators

In line with other meta-analyses and meta-regressions by public administration scholars (e.g., George et al. 2019; Walker et al. 2015), we focus on conceptual, contextual and methodological moderators of the red tape, employee outcomes and organizational performance relationship due to the typically observed heterogeneity within these three domains between (and within) empirical studies in our field. Importantly, the moderators mentioned below all belong to the three domains, but the actual choice of the moderators is both deductive (based on pre-defined theoretical arguments) and inductive (based on data availability observed after our initial coding of the data

as well as reviewer comments). The conceptual moderators center on the type of red tape included in a study. The contextual moderators center on whether a public or private organization is investigated and which administrative tradition the sample belongs to. The methodological moderator focuses on whether single versus multiple or experimental data sources are employed to measure red tape, employee outcomes and organizational performance. All of these moderators are part of important debates within public administration theory, research and practice in general and are further elaborated on below.

Type of red tape – We focus on three different types of red tape, namely internal red tape, external red tape and general red tape. This distinction is based on the actual source of red tape, i.e., where it comes from, which can be a helpful conceptualization for moving the field forward. First, several scholars have distinguished between internal and external red tape (e.g., Baldwin 1990; Bozeman 1993; Brewer and Walker 2010; Pandey and Scott 2002; Van den Bekerom 2017). Internal red tape is linked to rules, regulations and procedures that the organization enforces upon itself. External red tape is linked to rules, regulations and procedures imposed upon the organization by its external environment. The important difference between internal and external red tape lies in the notion of control – internal red tape can be directly influenced by the organization's leadership whereas external red tape requires extensive lobbying and is thus much harder to influence. Second, several scholars do not distinguish between internal or external red tape but, rather, focus on red tape in general no matter the source it comes from. This includes, for instance, studies employing the often-used one item statement from Bozeman (2000) to measure red tape. Hence, we assess whether the red tape, organizational performance and employee outcomes relationship is different for internal, external or general red tape.

Sector – The public-private distinction has been at the heart of much public administration and management research and has powered research on key public management themes. Indeed, Pandey (forthcoming) notes that, “Whereas the generic management tradition abandoned bureaucratic red tape research for a variety of reasons ... , nearly three decades of sustained public management research on bureaucratic red tape can be harnessed ... in a meaningful manner.” Boyne (2002) found support for a theory of publicness by indicating that public organizations tend to be more bureaucratic, with less materialistic managers who also exhibit less organizational commitment. Buelens and Van den Broeck (2007) further corroborated publicness by showing that employees in the public sector are less extrinsically motivated than those in the private sector. Importantly, both authors did indicate that some typical stereotypes of differences between the public and private sector are not confirmed by evidence. In the red tape literature in public administration particularly, the public-private distinction has been very influential and included in seminal studies on the subject (e.g., Pandey and Kingsley 2000; Rainey et al. 1995). Therefore, we use sector or public-private distinction as a contextual moderator and assess its relationship with organizational performance and employee outcomes.

Administrative tradition – Context is a crucial variable to consider within public administration theory, research and practice (Pollit 2013; O’Toole Jr and Meier 2015). Organizations tend to vary in their structure, management and organization based on the administrative tradition in which they operate. For instance, the regulatory environment within countries belonging to the Napoleonic, Scandinavian or Germanic administrative traditions has been shown to be more extensive than in countries belonging to the Anglo-American administrative tradition due to, among others, strong labor unions and influence from socialist parties (Löfstedt and Vogel 2001). Additionally, public organizations in the Napoleonic, Germanic

and Scandinavian administrative traditions particularly seem to have less autonomy, stronger political control as well as more rigid labor markets with loads of legal requirements compared to their Anglo-American counterparts (Meier, Rutherford and Avellaneda 2017). Several administrative traditions have been proposed by scholars (e.g., Giauque et al. 2011; Painter and Peters 2010) and based on the collected studies we specifically distinguish between Anglo-American, Germanic, Scandinavian and Postcolonial South Asian and African.

Data source – Several studies on red tape have employed a single, cross-sectional survey to measure the independent and dependent variables (e.g., Hattke et al. 2018; Van der Voet 2016). This results in potential questions concerning the extent to which common source bias might have inflated the identified effect sizes. Indeed, recent studies in public administration (e.g., Jakobsen and Jensen 2015) as well as previous work in management and psychology (e.g., Podsakoff et al. 2003) have identified that common source bias is a serious threat to consider when using one survey-based data source. Simultaneously, other scholars have urged caution toward common source bias assumptions and indicated that common source bias should not be considered a universal inflator of all effect sizes gathered from the same survey-based data source (e.g., George and Pandey 2017; Spector 2006). In line with these two positions, we assess whether the relationship between red tape, employee outcomes and organizational performance is influenced by the usage of a common data source (i.e., a cross-sectional survey) (category 1) versus multiple or experimental data sources (category 2) that do not suffer from common source bias.

Methods

Data

To identify relevant empirical public administration articles, we followed a systematic literature review process as recommended within the field of management studies (Leseure et al. 2004).

First, we formulated the scope of our review; namely the relationship between forms of red tape (i.e., internal, external, or general) and employee outcomes (i.e., typical employee outcomes such as job satisfaction, commitment, work motivation and stress) or organizational performance (i.e., including different dimensions such as organizational efficiency, effectiveness, outcomes and responsiveness). We thus excluded articles focusing on, for instance, the relationship between red tape and public service motivation (PSM) (e.g., Scott and Pandey 2005) as PSM is neither a performance nor an employee outcome, rather it is considered an antecedent of employee outcomes (see Homberg et al. 2015). Second, we did a topic search via Web-of-Science on 24 March 2019 focused on journals in SSCI¹. We used the search terms “red tape” or “administrative burden” and focused on articles in the Public Administration category of SSCI. This resulted in 181 potentially relevant articles. Third, we analyzed the titles and abstracts of these articles to identify whether these potentially fit within our scope and included 62 studies. Fourth, we read these articles to determine whether these offered original empirical evidence and fit within the defined scope – which resulted in 24 remaining articles. Fifth, we looked at recent citations of these 24 articles through Google Scholar to identify articles that might fit our criteria but are not yet included in Web-of-Science. One additional online first article was identified (Steijn and van der Voet 2019). Finally, we contacted 47 public administration scholars who recently published empirical studies on red tape to identify whether any articles were left out – no relevant additional articles were identified. Our meta-analysis thus integrates the findings of 25 empirical studies. These articles include 83 effect sizes between red tape and employee outcomes or organizational performance. Table 1 presents an overview of the included articles. Moreover, the systematic literature review process is summarized in Figure 1. The number of included articles and effect

sizes is similar to other recent meta-analyses in public administration (e.g., George et al. 2019; Walker 2013).

[Insert **Table 1** about here]

[Insert **Figure 1** about here]

On average, each article clusters about 3 effect sizes – with the minimum value being 1 and the maximum value being 20. Two studies focus solely on external red tape and 9 studies solely on internal red tape. The remaining studies either focus on both internal and external red tape as separate variables (3 studies), on general red tape (10 studies), or a combination of internal and general as two separate variables (one study). Seven studies focus on performance outcomes, 16 studies on employee outcomes and two studies on both. Most studies draw on data from a public-sector context (20 studies), with some using private-sector evidence (two studies) or a combination of both (three studies). Studies come from several different administrative traditions, including Anglo-American (9 studies), Germanic (12 studies), Scandinavian (3 studies) and Postcolonial South Asian and African (1 study). The majority of studies employ a single data source for data collection (18 studies) with 5 studies using multiple or experimental data sources and 2 studies using both. Interestingly enough, no articles predate 2004 and the majority of articles (14 studies) were published since 2015, which indicates that the attention toward red tape in relation to employee outcomes or organizational performance has been scarce but is clearly on the rise in public administration literature.

Meta-analytical procedure

In order to synthesize the findings of the identified empirical studies, we use a meta-analysis which is “the statistical analysis of a large collection of analysis results from individual studies for the purpose of integrating the findings” (Glass 1976, p. 3). We follow the guidelines for meta-analyses

in public management and policy proposed by Ringquist (2013) using the software package Stata. This approach includes four specific steps, namely (a) identifying effect sizes, (b) executing the meta-analysis, (c) executing the meta-regression analysis and (d) testing for publication bias (Field and Gillet 2010; Ringquist 2013). In what follows, we elaborate on these steps.

Identifying effect sizes – Before integrating the findings of the identified empirical studies, we need to transform these findings into one consistent effect size. Correlation coefficients are typically used in meta-analyses in the social and behavioral sciences because these are easy to understand and interpret, studies typically report correlation tables and when such tables are not presented correlation coefficients can be calculated based on information from regression models (Field and Gillet 2010; Ringquist 2013). Most of the identified articles reported correlation tables which thus made it easy to identify correlation coefficients between measures of red tape, employee outcomes and organizational performances. If no correlation table was presented, we use following formula based on the t-statistic and degrees of freedom presented in regression models:

$$r = \sqrt{[t^2 / (t^2 + df)]}$$

with t = the t-statistic and df = degrees of freedom

To calculate the t-statistic, we divided the unstandardized regression coefficient with its standard error. Finally, if the standardized regression coefficient was presented we followed the recommendations of Ringquist (2013) and used this coefficient as the effect size.² Some studies reported direct relationships in one model and added interaction terms in a second model, in these cases the coefficients in the first model (without the interaction) were selected. Importantly, we identified each effect size within a study – which thus implies that, typically, multiple effect sizes are included per study. This approach is recommended by Ringquist (2013) and allows us to create

sufficient data for our analyses even though our number of studies is limited. It does have some consequences for our meta-analyses and meta-regression model (see below).

Conducting the meta-analysis – After having transformed all studies’ findings into similar effect sizes, we need to calculate a population effect size across all studies. This was done using a random-effects meta-analysis with Fisher’s r-to-Z transformation. We use a random-effects model because we incorporate “real-world data [that] are likely to have variable population parameters” (Field and Gillet 2010, p. 673). In order to generalize our findings to a broader population, the unconditional inferences stipulated by random-effects models are needed (Hedges and Vevea 1998). Additionally, using Fisher’s r-to-Z transformation is argued to be a convention in meta-analyses within the social sciences (Ringquist 2013). The meta-analysis allows us to identify (a) the population effect size, its significance and its 95 % confidence interval, and (b) the heterogeneity of effect sizes overall using Chi^2 to identify whether there is significant variation among the identified effect sizes that can be explained using meta-regression analysis. The meta-analysis was done twice – once for the studies focusing on the relationship between red tape and organizational performance and once for the studies focusing on the relationship between red tape and employee outcomes. Finally, as a robustness check to account for studies clustering a large number of effect sizes, both meta-analyses are replicated but on the average effect size per study. Indeed, while our meta-regression (see below) accounts for clustering, the meta-analysis itself does not – it is thus important to ensure that population effect sizes are not distorted due to some studies including many more effect sizes than others.

Conducting the meta-regression analysis – After identifying the population effect size, we investigate sources of heterogeneity among the effect sizes using meta-regression analysis. The meta-regression analysis employs clustered standard errors at the study level to account for the

clustered nature (i.e., multiple effect sizes possible per study) of our data (Ringquist 2013). The dependent variable in this analysis are the Z-transformed effect sizes whereas the previously defined moderators are the independent variables. Per moderator, the meta-regression analysis reports an unstandardized regression coefficient, its significance, standard error and 95 % confidence interval thus allowing us to indicate which moderator is a significant source of heterogeneity in effect sizes overall. To ensure the needed power to analyze the moderators, both the effect sizes focused on organizational performance and employee outcomes are included in the same model. This can be justified from a theoretical perspective and from a methods perspective. First, the identified moderators do not distinguish between the type of outcome impacted by red tape – there is no theoretical grounding expecting them to moderate the relation with employee outcomes more than with organizational performance (or vice versa). Second, we can control for the difference between organizational performance and employee outcomes by adding this distinction as an additional variable in our model which thus implies that heterogeneity as a result of different outcomes is accounted for when assessing the impact of the other moderators.

Identifying publication bias – Publication bias, also known as the “file drawer problem”, is an often-mentioned critique on meta-analyses of journal articles and implies that statistically significant findings are more likely to be published than null results (Rosenthal 1979). A statistical synthesis of published articles could thus be skewed. To identify potential problems with publication bias, we employ both visual and statistical tests. Specifically, we follow Ringquist’s (2013) as well as Field and Gillet’s (2010) recommendations and report a symmetric funnel plot as visual test as well as the Egger test and Begg test as statistical tests for publication bias. Importantly, it should be noted that the magnitude of publication bias has been shown to be quite

small in other fields (Rosenthal 1991) and publication bias should thus not be assumed to always skew meta-analytical results.

Results

Meta-analysis

Table 2 and Table 3 present the results of the random-effects meta-analyses using Fisher's r-to-Z transformation. Table 2 focuses on organizational performance and draws on 44 effect sizes. It shows that the population effect size is negative (-.108), significant ($z = 3.44$, $p < .01$) and of small-to-medium strength ($.10 < \text{population effect size} < .30$) according to Cohen (1992). Additionally, the Chi^2 value (387.52) is statistically significant ($p < .001$) – which indicates that there is significant heterogeneity between effect sizes overall and further meta-regression is validated to identify sources of said heterogeneity. Table 3 focuses on employee outcomes and draws on 39 effect sizes. It shows similar findings as Table 2, although the population effect size is slightly bigger (yet still within the .10 and .30 range of small-to-medium strength). In other words, based on our meta-analyses, red tape has a significant, negative and small-to-medium impact on both organizational performance and employee outcomes. Importantly, as is clear from Table 2 and Table 3, when the meta-analyses are replicated on one average effect size per study the results are similar and the population effect sizes even become slightly bigger (albeit still within the small-to-medium range).

[Insert **Table 2** about here]

[Insert **Table 3** about here]

Meta-regression analysis

Table 4 presents the results of the random-effects meta-regression model with clustered standard errors at the study level. Table 4 shows a statistically significant model ($F = 3.17$, $p < .01$), and explains about 54 % of heterogeneity in effect sizes overall. As expected, there are no significant differences between effect sizes focused on employee outcomes versus those focused on organizational performance – in both cases red tape is equally harmful. The model does show that external red tape is significantly less harmful than internal red tape. Moreover, red tape is significantly more harmful in a Postcolonial Southeast Asian and African administrative tradition. A word of caution is necessary for this last finding, however, as only four correlations from one study focus on this specific administrative tradition making broad generalizations unwise. The model also shows that red tape's negative impact does not significantly differ between sectors, nor between Anglo-American, Germanic and Scandinavian administrative traditions. Similarly, whether a single source versus distinct or experimental sources were used did not have any significant impact. Conclusively, based on the meta-regression analysis of public administration evidence it seems that red tape's negative impact is quite similar across most contexts and methods, making it a universal issue rather than a context-specific problem, and red tape imposed by the own organization is more harmful than that imposed by external parties.

[Insert **Table 4** about here]

Publication bias

Figure 2 and 3 present visual tests of publication bias. In these figures, we are looking for symmetry between the effect sizes as an indication of no publication bias. While these figures seemingly point toward symmetry overall, there are some outliers apparent and the visual scan is inconclusive. Hence, we conduct the Begg test and Egger test as statistical tests of publication bias. First, we discuss the test results for the red tape – organizational performance population effect

size. The Egger test indicates the existence of publication bias (i.e., a significant coefficient) while the Begg test indicates no issues with publication bias (i.e., an insignificant z-value). Second, we discuss the test results for the red tape – employee outcomes population effect size. The Egger test indicates no issues with publication bias (i.e., an insignificant coefficient) while the Begg test further corroborates this finding (i.e., an insignificant z-value). Conclusively, the tests for organizational performance are inconclusive although it should be noted that the Egger test has been found to suffer from type I error especially when a high degree of effect size heterogeneity is present (Ringquist 2013) – thus leading us to conclude that publication bias does not seem to be a major threat in our analyses.

[Insert **Figure 2** about here]

[Insert **Figure 3** about here]

Discussion

This article sought to answer two research questions fundamental to public administration theory, research and practice: (a) What is the impact of red tape on employee outcomes and organizational performance and (b) which conditions moderate this impact? Using a systematic literature review process, we identified 25 empirical public administration articles and 83 effect sizes investigating the relationship between red tape, employee outcomes and organizational performance published in the past 15 years. Through state-of-the-art meta-analytical methods, we identified that red tape has a significant, negative and small-to-medium impact on both employee outcomes and organizational performance. Moreover, we uncovered that the negative impact of red tape is stronger when it is imposed by the own organization as opposed to by external parties, and that the negative impact of red tape remains quite stable across contexts and methods making it a seemingly

universal issue as opposed to only a context-specific problem. These findings have clear implications for public administration theory, research and practice.

Implications for theory

Our meta-analysis confirms the theoretical assumption that red tape has a direct negative impact on organizational performance based on the argument that red tape hinders organizations in achieving their mission as well as be responsive towards clients (Brewer and Walker 2010). Similarly, our meta-analysis confirms the theoretical assumption that red tape has a direct negative impact on employee outcomes because it increases alienation among employees based on overly constraining rules, regulations and procedures (DeHart-Davis and Pandey 2005; Quratulain and Khan 2015). While both assumptions draw on different literature streams, we confirm that these are both – in their own right – applicable to theorize about red tape’s negative impact in organizations. Interestingly enough, the strength of the negative impact is similar for both employee outcomes and organizational performance – indicating that both outcomes are equally influenced by red tape in a direct manner.

Future theorizing could seek to link these two outcomes more explicitly by identifying whether mediated models between red tape, employee outcomes and organizational performance might better unravel the complex causality underlying red tape’s negative impact. Such mediated models are in line with current HRM research which assumes that HRM practices contribute to employee outcomes which, in turn, contribute to organizational performance – also called the bathtub model (e.g., Van De Voorde, Paauwe and Van Veldhoven 2012; Vermeeren, Kuipers and Steijn 2014). We specifically encourage theorizing about the multilevel connections (and interactions) between micro (employee outcomes), meso (organizational performance) and macro (traditions, institutions and culture) levels of analysis when assessing red tape’s negative impact.

Importantly, while we indeed identify a significant negative impact of red tape on organizational performance and employee outcomes, the strength of this impact is small-to-medium. This does imply that red tape has an important negative impact but, simultaneously, is not as “apocalyptic” as sometimes assumed in public administration theory.

More importantly, future research syntheses need to take a broader perspective on red tape. Carrigan et al. (2020: 49) call for “consilience and conceptual unity” to look for common themes in different conceptualizations of the same underlying phenomenon. They provide a schematic representation identifying four dimensions along which one can look for common threads across different conceptual vocabularies, namely, significant social roles, subjective experiences, organizational and institutional features, and impact. The value of using schemas like this lies in going beyond the perils of underdetermination of theory by evidence, i.e., an expanding conceptual vocabulary for the same underlying phenomenon with the risk that the variation in conceptual vocabulary is equated with differences that do not obtain in the underlying phenomenon. Looking for consilience and conceptual unity is a way to communicate meaningfully when bloated theoretical vocabularies stands in the way of synthesizing findings and cumulating knowledge. In order to help a future research agenda that can carry out syntheses across apparent conceptual divides, we offer a comparison of concepts that bear a family resemblance to red tape in Table 5. Our use of the term family resemblance follows Wittgenstein. Biletzki and Matar (2020) describe this idea succinctly contrasting it with traditional dogmatic approaches that try to locate an essential core, “We should, instead, travel with the word’s uses through ‘a complicated network of similarities overlapping and criss-crossing’ ... Family resemblance also serves to exhibit the lack of boundaries and the distance from exactness that characterize different uses ...”.

[Insert **Table 5** about here]

We draw upon recent reviews of red tape scholarship (Campbell 2019; Davis and Pink-Harper 2016; Pandey forthcoming) and research on related concepts to create Table 5. The first column provides the name of the concept and its definition, followed by characterization of the worldview in which the concept is grounded, identification of the primitive concept used in the definition, and a comment characterizing key aspects of the concept. There are many common themes across these concepts which are either grounded in an economic benefit-cost view or a psychological process view (see Pandey forthcoming). Compliance burden (or variations like compliance costs and frictions) is the common denominator primitive concept used across various definitions. While one definition incorporates psychological costs in the concept, another sees psychological, emotional, and other dimensions as either a cause or effect (see Christensen et al. 2020; Hattke et al. 2020). We hope that the “similarities overlapping and criss-crossing” will provide a firm basis for future syntheses that integrate research using these different theoretical vocabularies.

Implications for research

Our meta-regression analysis also confirms the notion of red tape as a multidimensional construct (e.g., Brewer and Walker 2010; Coursey and Pandey 2007; Van Loon 2017). We specifically looked at three different dimensions, namely internal, external and general red tape, and found that external red tape is less harmful than the other two types. This finding implies a need for future research to consider red tape not as a unidimensional variable, but as a complex construct that constitutes different dimensions which might have different degrees of impact on employee outcomes and organizational performance. It also raises the need for more deep-grained theorizing about why different forms of red tape might have weaker or stronger impacts on specific outcomes. It seems that our meta-regression suggests that not all forms of red tape are equally bad all of the

time – as assumed by the above-mentioned theoretical frameworks – and more middle-range theorizing will enable us to identify which form of red tape matters most, when and why (Abner et al. 2017). Similarly, organizational performance and employee outcomes are – as is clear from Table 1 – not homogeneous concepts but, rather, multidimensional in nature as well (Walker and Andrews 2015). While the limited dataset did not allow us to identify how different dimensions in these outcome variables influence red tape’s negative impact, we do encourage future theorizing about whether and how different types of red tape influence different dimensions of organizational performance and employee outcomes. Indeed, a stronger focus on the multidimensional nature of both red tape, organizational performance as well as employee outcomes is likely to progress public administration theory. In line with our findings on internal versus external red tape we particularly encourage future work focused on explaining the role of the source of red tape (internal versus external), and identifying whether and how internal red tape specifically can be readily tackled by public managers and in an easier manner than external red tape.

Moreover, we tie in with calls from a variety of recent studies (e.g., Pollit 2013; O’Toole Jr and Meier 2015) by assessing whether context matters in explaining heterogeneity in red tape’s negative impact. Interestingly enough, we found that – based on current public administration evidence – it seems that red tape’s negative impact is quite stable across different sectors and administrative traditions. This seemingly adds to the perspective that red tape is a universal issue as opposed to a context-specific problem, which does tie in with the perspective of many authors in the field (e.g., Bozeman 1993; Pandey and Scott 2002). We do, however, need to nuance this finding because of the limited amount of studies explicitly focusing on private sector organizations (only 2) as well as non-Germanic and non-Anglo-American administrative traditions (only 4). Indeed, one of the most important research avenues for future red tape work centers on assessing

its impact in different sectors as well as different administrative traditions before we can confirm red tape's negative impact as being truly universal. This implies both theory-building work seeking to offer a theoretical explanation as to why red tape's impact might differ between sectors or administrative traditions as well as theory-testing work using cross-country and cross-sector samples aimed at testing these explanations. Additionally, Kaufmann et al. (2018) showed that formal versus informal country-level institutions matter when assessing red tape's impact and other country-level variables than administrative tradition might provide fruitful research avenues. Interestingly, some private and public organizations also operate across administrative traditions, for instance multinational companies, the World Bank and the Organization for Economic Cooperation and Development. These organizations do not belong to any one tradition, which poses an interesting case to study the impact of red tape. Finally, it is important to note that while our finding that red tape has a stronger negative impact in Post-Colonial traditions is based on limited evidence, it does confirm other authors' view that red tape can be particularly harmful in these settings (e.g., Gupta 2012; Nisar 2018). More work from this tradition is thus desperately needed to move public administration theory forward.

Linked to this recommendation for future research across sectors and traditions is also the need to assess other contextual variables and their importance in the red tape, organizational performance and employee outcomes relationships. Evidence has shown that, for instance, strategy in public organizations matters in mitigating the red tape – organizational performance relationship (Walker and Brewer 2009); and future studies could theorize and test moderating impacts of a range of organizational and environmental variables. Such contingency or configurational models have long been popular in public management specifically and could help progress our understanding of red tape's harmful impact as well. For instance, how could red tape be linked to

ongoing management approaches such as strategic planning? Could strategic plans be internal sources of red tape, could strategic planning processes help cope with red tape by clarifying (and assessing) the functionality of rules, regulations and procedures to key stakeholders involved in the process, or could strategic planning be initiated specifically as an attempt to manage internal and external red tape (George 2020)? Time could also prove to be an important contextual variable – during the COVID-crisis, for instance, rules, regulations and procedures were used by policymakers and public managers as an attempt to battle the pandemic as well as measure performance (George et al. 2020). How did these affect organizational performance and employee outcomes and are these effects lasting or time-specific?

The fact that it did not matter much whether common versus multiple or experimental data sources were used also offers an interesting methodological implication. Common source bias is indeed a very potent and salient critique of common data source studies in public administration (Jakobsen and Jensen 2015). Our findings provide empirical evidence for the argument that common source bias should not be considered a universal inflator of effect sizes (George and Pandey 2017; Spector 2006). Specifically, we did not find evidence for common source bias in our data and analysis. This finding gives credence to further survey-based studies of red tape – with, of course, the comment that these should follow the highest standards of survey research in the social sciences and might still suffer from endogeneity (Pandey and Marlowe 2015). Experimental and longitudinal approaches using surveys could be particularly useful to cope with endogeneity while maintaining sufficient external validity. Similarly, laboratory experiments could help identify a range of behavioral and emotional responses to red tape without suffering from endogeneity or only measuring behavioral intent (see Hattke et al. 2020 for an outstanding exemplar of such an approach). Moreover, theory-building qualitative studies on red tape can also

be particularly useful especially for helping to understand differences between external and internal red tape's impact in organizations.

Implications for practice

Our findings have important consequences for practitioners. First of all, policy and management initiatives worldwide have been implemented with the aim of reducing red tape. We give credence to these initiatives as we provide empirical evidence that red tape is detrimental to both employee outcomes and organizational performance, and should thus be actively combatted. Importantly, we also demonstrate that – based on public administration evidence – red tape's negative impact largely holds across sectors and administrative traditions making this a universal issue as opposed to only a context-specific problem. Indeed, these findings suggest that battling red tape is an important task of public managers and policymakers worldwide, and red tape should be a strategic issue that requires continuous attention and follow-up in policy agenda's, and government strategic planning and management (Bryson and George 2020). Simultaneously, we offer some more focus on how to combat the red tape issue.

We encourage practitioners to explicitly focus on reducing internal measures of red tape. Our findings indicate that red tape imposed by the organization itself is more detrimental than external measures. In a way, this is good news for practitioners. After all, internal rules, regulations and procedures that elicit red tape perceptions seemingly fall more within the span of control of public managers. While the external part might require extensive lobbying, changing regulation and so forth, the internal part can typically – to some extent – be controlled by the management team of an organization – although reducing it might prove to be equally challenging. So we encourage practitioners to analyze the rules, regulations and procedures (e.g., as part of employee appraisal, promotion or evaluation systems) that they impose on their own organization critically

and ask whether these might actually induce red tape perceptions among employees. And, if so, they need to ask how these rules, regulations and procedures can be made more functional for the task (and stakeholder) at hand.

Limitations

While our findings have clear implications for public administration theory, research and practice, we need to acknowledge three limitations of our meta-analysis. First, although we test for publication bias it can never be completely ruled out. While our choice for articles published in SSCI-journals is a choice for quality assurance toward the incorporated literature, it also implies that our findings are influenced by the preferences of journal editors and reviewers. Second, while 25 studies and 83 effect sizes for a meta-analysis is enough from a statistical perspective and is quite common within the social and behavioral sciences, it also implies a limited number of studies to draw generalizable conclusions and investigate a wide variety of moderators. We thus urge caution toward broad generalizations of our findings and encourage future meta-analytical efforts on a more extensive body of evidence aimed at replicating our analysis as well as identifying additional sources of heterogeneity due to conceptualizations, contexts and methods. Third, most of our studies were cross-sectional and non-experimental. In other words, we cannot infer causality and stimulate future experimental and longitudinal work on the subject to be able to conduct more robust meta-analyses in the future.

Conclusion

Reducing red tape remains at the heart of public administration theory, research and practice. This study offered one of the first meta-analyses and meta-regressions on the relationship between red tape, employee outcomes and organizational performance based on public administration

evidence, and found that these endeavors to reduce red tape are well-merited. Indeed, red tape is harmful to both employee outcomes and organizational performance – although perhaps not as harmful as sometimes assumed. Moreover, red tape seems to be less harmful when it is externally imposed, which implies that the type of red tape being measured matters when assessing red tape’s impact. This paper has only begun to scratch the surface of the red tape issue based on a strikingly limited amount of empirical public administration studies for such an important topic. We encourage more research on the impact of red tape on employee outcomes and organizational performance so that future meta-analytical studies can draw on a more vast empirical literature to stipulate evidence-based recommendations. In discussing implications for theory, we have sketched out a schema that can ground future research syntheses and draw upon a wider body of empirical research even though they may use somewhat different conceptual vocabularies. We recommend that scholars utilize bibliometric analysis and content analysis techniques to get a more in-depth understanding of different discourses that use the terminologies of administrative burden, regulation, and red tape. We believe following these recommendation will enrich our understanding of red tape and its societal effects.

Notes

¹ By focusing on articles published in SSCI-classified journals, we follow the same approach of Walker and Andrews (2015, p. 108) who argued that this approach ensures “peer-reviewed journal articles that were judged to be of suitable quality for publication by editors following a blind review process, and therefore expected to meet the basic requirements of theoretical and methodological rigor”.

² Some effect sizes looked at negative employee outcomes (e.g., stress) as opposed to positive outcomes (e.g., job satisfaction). For consistency purposes, we transformed the sign of these effect sizes (+ becomes - and vice versa) to ensure consistency among all effect sizes. Hence, we can thus assume that we identify the overall negative impact of red tape on positive employee outcomes.

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Tables

Table 1. Overview of included articles in alphabetical order

Author(s)	# of effect sizes	N	Type	Outcome	Specific	Sector	Tradition	Data source
Borst (2018)	6	13,513	General	Employee	Work engagement, employee performance, job satisfaction	Public	Germanic	Single
Brewer and Walker (2010)	20	136	Internal and external	Employee and performance	Staff satisfaction, equity, quality, aggregate, socio-econ wellbeing, effectiveness, customer satisfaction, value for money, efficiency, core service performance	Public	Anglo-American	Single and multiple
Bronkhors et al. (2015)	1	958	General	Employee	Work motivation	Public	Germanic	Single
Davis (2013)	1	602	General	Employee	Job satisfaction	Public	Anglo-American	Single
de Jong and van Witteloost	6	530	External	Performance	Market performance, sales turnover growth	Private	Germanic	Single

Author(s)	# of effect sizes	N	Type	Outcome	Specific	Sector	Tradition	Data source
uijn (2015) DeHart- Davis and Pandey (2005)	6	269	Internal	Employee	Job satisfaction, organizational commitment, job involvement	Public	Anglo-American	Single
Giauque et al. (2012)	1	3,754	Internal	Employee	Resigned work satisfaction	Public	Germanic	Single
Gianque et al. (2013)	1	859	Internal	Employee	Stress	Public	Germanic	Single
Hansen and Kjeldsen (2018)	1	1,043	General	Employee	Affective commitment	Both	Scandinavian	Single
Hattke et al. (2018)	2	1,331	Internal	Employee	Job satisfaction, career intention	Public	Germanic	Single
Jacobsen and Jakobsen	2	142	General	Performance	School value-added to student learning	Public	Scandinavian	Multiple

Author(s)	# of effect sizes	N	Type	Outcome	Specific	Sector	Tradition	Data source
(2018) Jung and Kim	2	716	Internal and general	Performance	Organizational work quality and client satisfaction	Public	Anglo-American	Single
(2014) Kaufman and Tummers	1	141	Internal	Employee	Procedural satisfaction	Both	Anglo-American	Experimental
(2017) Kjeldsen and Hansen	1	1,018	General	Employee	Job satisfaction	Both	Scandinavian	Single
(2018) Quratulain and Khan	4	217	Internal	Employee	Resigned satisfaction, turnover intention, stress, withdrawal behavior	Public	Postcolonial South Asian and African	Single
(2015) Stazyk et al. (2011)	1	206	Internal	Employee	Affective commitment	Public	Anglo-American	Single
Steijn and van der	3	244	Internal	Employee	Job satisfaction, job impact, job contact	Public	Germanic	Single

Author(s)	# of effect sizes	N	Type	Outcome	Specific	Sector	Tradition	Data source
Voet (2019)								
Torenvlied and Akkerman (2012)	4	792	Internal and external	Employee	Work motivation, organizational commitment	Public	Germanic	Single
Tummers et al. (2016)	1	179	External	Performance	Citizen satisfaction	Public	Germanic	Experimental
Van den Bekerom et al. (2017)	4	523	Internal and external	Employee and performance	Work engagement, student test score	Public	Germanic	Single and multiple
Van der Voet (2016)	1	515	General	Employee	Commitment to change	Public	Germanic	Single
Van Loon (2017)	10	49	General	Performance	Output, responsiveness, overall performance, democratic outcome, societal outcome	Private	Germanic	Multiple

Author(s)	# of effect sizes	N	Type	Outcome	Specific	Sector	Tradition	Data source
Walker and Brewer (2009)	2	135	Internal	Performance	External performance (core service performance), internal performance	Public	Anglo-American	Multiple
Wright (2004)	1	267	General	Employee	Work motivation	Public	Anglo-American	Single
Yang and Pandey (2011)	1	1,097	General	Performance	Participation outcome	Public	Anglo-American	Single

Table 2. Results of meta-analysis red tape and organizational performance

Number of effect sizes	Population effect size	95 % confidence interval	Chi²	I²	Tau²	z
44	-.108	[-.169, -.047]	387.52***	88.9 %	.0351	3.44**
9	-.184	[-.322, -.047]	116.55***	93.1%	.0387	2.63**

*p < .05, **p < .01, ***p < .001

Table 3. Results of meta-analysis red tape and employee outcomes

Number of effect sizes	Population effect size	95 % confidence interval	Chi²	I²	Tau²	z
39	-.151	[-.202, -.100]	1959.37***	98.1 %	.0237	5.81***
18	-.183	[-.258, -.107]	451.60***	96.2%	.0241	4.75***

*p < .05, **p < .01, ***p < .001

Table 4. Results of meta-regression red tape, organizational performance and employee outcomes

Moderator	Coef.	Robust Std. Err.	t	P > t 	95 % Conf. Interval
Outcome (employee outcomes is reference)					
Performance	.001	.074	.01	.988	[-.151, .153]
Type (internal is reference)					
External	.142*	.060	2.36	.027	[.018, .266]
General	-.073	.062	-1.19	.247	[-.200, .054]
Sector (Public and both is reference)					
Private sector	-.024	.081	-.30	.767	[-.192, .144]
Tradition (Anglo- American is reference)					
Germanic	.036	.061	.58	.566	[-.091, .162]
Scandinavian	.086	.077	1.13	.270	[-.072, .245]
Postcolonial	-.135*	.049	-2.75	.011	[-.237, -.034]
Data source (multiple is reference)					
Single	.024	.078	.30	.765	[-.138, .185]
Constant	-.176	.105	-1.67	.107	[-.393, .041]
Number of observations	83 effect sizes				
F-value	3.17**				
R ²	.541				
Root MSE	.966				

*p < .05, **p < .01, ***p < .001

Standard errors are adjusted for 25 clusters (i.e., studies) in the data.

Table 5. Path to Consilience in Red Tape Research: Family Resemblance Among Different Concepts

Concept and Definition	Worldview	Primitive Concept used in Definition	Comment
Organizational Red Tape: “[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.” (Bozeman 1993: 283)	Economic Benefit-Cost View	Compliance Burden	Rule-based conceptualization; compliance burden defined in terms of costs to the organization.
Bureaucratic Red Tape: “Bureaucratic red tape is role-specific subjective experience of compliance burden imposed by an organization.” (Pandey forthcoming; also see Campbell 2019; Pandey and Kingsley 2000)	Psychological Process View	Compliance Burden	Individual experience based conceptualization; emphasis on subjective experience of compliance burden.
Green Tape: “[Green] tape is delineated by five attributes: (1) Written requirements, (2) with valid means-ends relationships, which (3) employ optimal control, (4) are consistently applied, and have (5) purposes understood by stakeholders.” (DeHart-Davis 2009: 362)	Economic Benefit-Cost View	Rule attributes	Rule-based conceptualization; emphasis on rule attributes that improve rule performance
Administrative Burden: “A simple definition of administrative burden is that it is an individual’s experience of a policy’s implementation as onerous. A more specific definition is that administrative burdens are the learning, psychological, and compliance costs that citizens experience in their interactions with government.” (Herd and Moynihan 2018: 22; also see Christensen et al. 2020)	Psychological Process View	Compliance Costs; Psychological Costs; Learning Costs	Individual experience based conceptualization; emphasis on three different kinds of costs – compliance costs, learning costs, and psychological costs
Sludge: “If sludge is understood to consist of excessive frictions, the concept is not exactly mysterious. Much sludge consists of dreary or duplicative paperwork, understood to include time spent online.” (Sunstein 2020: 4; Also see Thaler 2018)	Economic Benefit-Cost View	Frictions	Emphasizes “frictions” defined in terms of costs incurred by the individual in following rules and procedures

Figures

Figure 1. Systematic literature review process

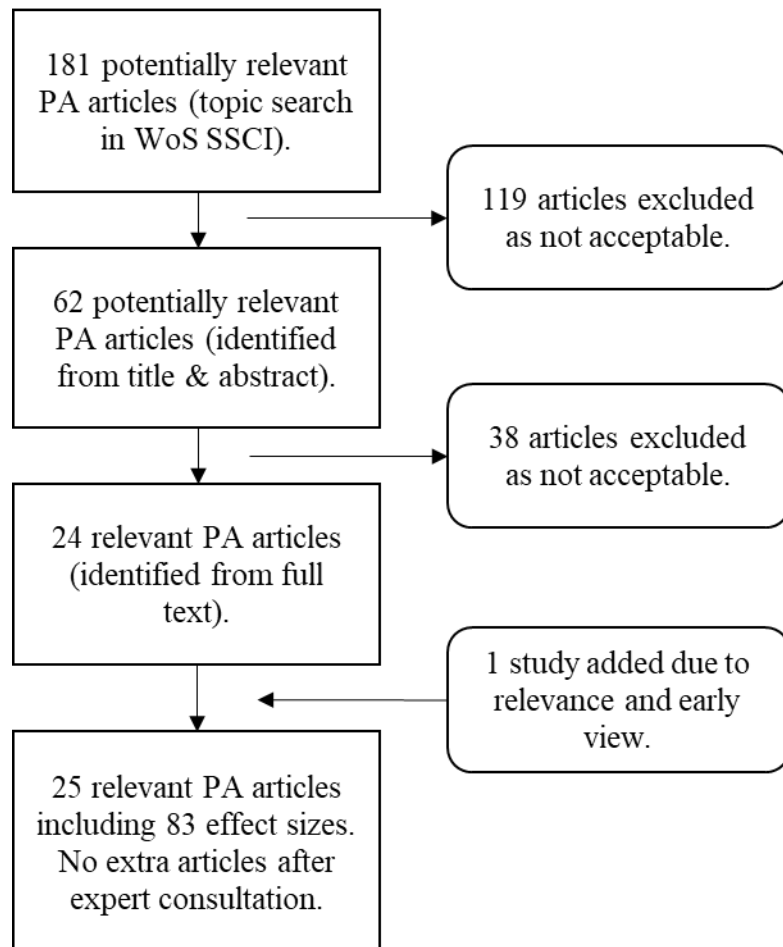


Figure 2. Funnel plot of effect sizes red tape and organizational performance

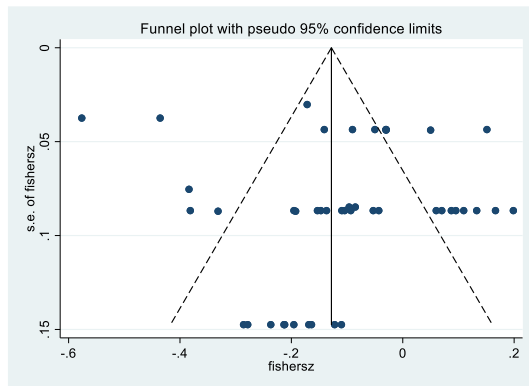


Figure 3. Funnel plot of effect sizes red tape and employee outcomes

