## CIVIL SERVICE MANAGEMENT AND CORRUPTION: WHAT WE KNOW AND WHAT WE DON'T

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#### Abstract

Numerous studies have linked a range of economic, social, and institutional variables with corruption in government. Yet, most of this literature overlooks the management of public officials themselves. This is a relevant omission: almost all corrupt exchanges involve public officials. This article reviews studies – 36 in total – that do address civil service management and anti-corruption. It finds that prior works assess a narrow set of civil service management structures. Meritocratic recruitment and, less robustly, pay levels have been associated with lower corruption. By contrast, robust evidence on how corruption relates to other established public personnel management areas – such as distinct pay structures (rather than levels), promotion, transfer, and job stability practices – is largely unavailable. The article thus calls for research assessing the effects of a broader set of civil service management practices to gain a deeper understanding of corruption, and how to curb it.

## Introduction

Since the early days of public administration as a research field, corruption containment has been among the central aims civil service reforms have sought to achieve (Wilson 1887). At the political level, part of the impetus for civil service reform, particularly in the United States, came from the wish to fight back against corruption pursued through spoils (see e.g. Rubin and Whitford 2008). To this day, civil service professionalization is regarded as an important tool for containing corruption among academics and practitioners (Dahlström, Lapuente, and Teorell 2012; Rauch and Evans 2000; Neshkova and Kostadinova 2012).

Nonetheless, as we shall argue in this review article, empirical evidence on how the organization and management of civil service systems relate to corruption remains scant. The bulk of the corruption literature does not address the structure and management of executive government, instead focusing its search for corruption correlates on society, the economy, and macro-political institutions (for overviews, see e.g. Treisman 2007; Olken and Pande 2012).

This is a serious limitation. From a scholarly standpoint, studying public servants and their organizations means studying the people who are the primary actors in corrupt behavior. After all, corruption is usually defined as the abuse of public office for private gain. Not focusing on studying public servants means forgoing a more fundamental understanding of why corruption occurs and how it can be contained. From a practitioner stand point, studying the management of public employees provides an opportunity to derive actionable policy recommendations that studies of society, the economy, or political institutions cannot give.

This article reviews what we know about civil service management and corruption. Following Berman's (2015, 114) definition of "technical human resource management," (henceforth simply HRM) we understand civil service management in this article as "functions for the day-to-day operations of managing people in [public] organizations." Core civil service management functions include recruitment, selection, remuneration, promotion, performance appraisal, transfer, employment protection and dismissals. To retain a manageable and clear scope, our review is circumscribed to this conceptualization. We thus exclude the literatures on broader strategic and cultural areas of human resource management (e.g. Berman 2015); and on oversight and monitoring and corruption (e.g Di Tella and Schargrodsky 2003; Olken 2007).

In total, our review comprises the critical assessment of 36 studies. We identified these studies as follows: first, we searched the online archives of nine high-ranking journals in political science and public administration for all papers published since 2000 that had corruption in their titles or abstracts (using the truncation corrupt\*). The journals and the number of articles identified in each are listed in table 1. Second, we excluded from these studies those that did not focus on any aspect of civil service management as an independent variable or corruption as a dependent variable. Lastly, we searched the references of the selected papers and papers or books referencing them using the same criteria. In addition, we included any relevant studies that we were aware of, but did not reach using this search. As indicated in table 1, this search led us from our initial journal selection focused on political science and public administration into other fields – most prominently economics but also area studies, criminology, and business ethics. Thus, the study of corruption and civil service management is very much interdisciplinary.

**Table 1:** Overview of searched journals and applied methodology

Journal	Article count	Approach		
		Experimental	Other quantitative	Qualitative
Public Administration	2		1	1
Governance	4		2	2

The Journal of Public Administration Research and Theory	1		1	
Public Administration Review	4		1	3
The International Public Management Journal	2		1	1
The American Journal of Political Science				
The American Political Science Review				
The Journal of Politics	1		1	
Comparative Political Studies	1	1		
Other journals (public administration, policy, and political science)	16		7	9
Other journals (economics)	12	5	7	
Other journals (other fields)	14		3	11
Total	57	6	24	27

**Note:** The overview excludes three books and two unpublished working papers; two of which use qualitative methods while three use observational quantitative data.

In total, we reviewed 62 studies (57 journal articles, 3 books, and 2 unpublished working papers). Of these studies, 27 are qualitative, and 30 quantitative; 6 of the quantitative studies are experimental. The distribution of articles and their methodological approach across journals is shown in table 1. As this table shows, most experimental work is published in economics journals, while articles published in public administration and political science are divided almost evenly among mostly observational quantitative and qualitative studies. Most studies focus on Europe and Asia (17 studies each), followed by global or cross-regional studies (10), Latin America (6), Africa (5), and North America (5) (see the Online Appendix for further detail). We cite and discuss the 36 that contribute to our discussion in terms of separate theoretical arguments and/or robust or dissenting evidence.

Our review finds that most existing literature has focused on recruitment, selection and levels of remuneration – yet not other HRM practices. We still know little about how transfer or promotions (though see Charron et al. 2017; Kwon 2014), pay structures, stable careers or turnover, to name a few, affect corruption. We build on these gaps to present an agenda for future research, which draws on a more complete pallet of HRM practices and more encompassing set of research methodologies. Producing such research would provide important guidance to policymakers seeking to manage people in ways that minimize corruption risks.

#### What We Know and What We Don't

The literature linking civil service management to corruption has, as noted, largely focused on recruitment, selection, and remuneration. We cover below the research on each, followed by discussions of the smaller literature on other HRM functions: promotions, performance, transfers, job stability, and employment protection.

#### Recruitment and Selection

Prior studies have variably focused on two aspects of recruitment and selection: the criteria determining recruitment and selection outcomes (in particular: merit vs. political criteria); and the process through which candidates are selected (in particular: examinations vs. appointments).

Merit- and exam-based recruitment and selection have, at times interchangeably, been linked to lower corruption through at least three mechanisms. First, officials recruited based on their educational achievements or through competitive examinations are argued to be more concerned with their reputation among colleagues, leading to greater adherence to norms of behavior such as honesty (Rauch and Evans 2000). Second, merit recruitment has been argued to shift accountability. With meritocratic recruitment comes a corps of civil servants whose interests diverge from those of their political masters. This gives both politicians and bureaucrats an incentive to hold each other to account and check corrupt behavior (Dahlström, Lapuente, and Teorell's 2012). Third and related, Neshkova and Kostadinova (2012, 327) argue that the relationship to politics is central to how recruitment contains corruption. The absence of political criteria in recruitment shelters administrative decisions from political rent seeking and makes civil servants better capable of withstanding political pressure since their career is not on the line to the same extent and since they do not owe their appointments to political superiors. Note that, interestingly, simple technical capacity does not feature in most accounts (e.g. Dahlström et al. 2012), perhaps because these skills are also useful to "formalize" and "legalize" corrupt deals (Janscisc and Jávor 2012).

A range of studies has provided empirical evidence for the theorized association between meritor exam-based selection and lower corruption, all suggesting that merit curbs corruption. Initial evidence came from a cross-national study by Rauch and Evans (2000). This was followed by country-level cross-national evidence in Dahlström, Lapuente, and Teorell (2012) and, based on civil service legislation, Neshkova and Kostadinova (2012). Recanatini et al. (2005) provide additional evidence from African and Latin American agencies, though their measurement strategy renders distinction between recruitment and promotion impossible. More recently, Meyer-Sahling and Mikkelsen (2016) provide evidence based on individual-level data from a survey of public servants in five Eastern European countries; and Oliveros and Schuster (2017) conduct a conjoint experiment in the Dominican Republic, finding the, to our knowledge, first (survey) experimental support for the argument that merit recruitment limits corruption. Finally, Bersch et al. (2016) use administrative data from Brazilian agencies to show a positive correlation between agency politicization and corruption. This finding is supported by

Heywood and Meyer-Sahling's (2013) qualitative analysis of the Polish ministerial bureaucracy.

In sum, the literature provides several theoretical arguments linking merit- and exam-based selection to lower corruption, as well as quantitative and qualitative evidence for a corresponding association.

At the same time, which mechanism(s) sustains this association has not been empirically explored. This is unfortunate as most of the proposed mechanisms are, as seen from empirical analyses in the current literature, observationally equivalent. Moreover, which of the theorized - or other - mechanisms are at play, is likely to depend on context. In organizations staffed by professions such as nurses, police officers, or teachers, Rauch and Evans' (2000) theory intuitively carries some punch. Collegial influences on employee intent and behavior in such contexts are well documented (Brehm and Gates 1999 famously referred to this as 'solidary rewards'). In organizations with weaker professions, however, meritocratic recruitment is arguably much less like to create the requisite esprit-de-corps to curb corruption. Similarly, whether politicians are capable of holding public employees accountable for corruption as Dahlström et al (2012) theorize will depend. Street-level bureaucrats, for instance, are notoriously difficult to observe and even managers cannot effectively monitor employee behavior (Brehm and Gates 1999). Finally, in systematically corrupt settings, an attractionselection mechanism may be at work: individuals self-select into the public sector based on expected future corrupt gains (Banerjee et al. 2015; Engvall 2015). In that case, rather than altering norms or incentives after selection, meritocratic recruitment may change the pool of available candidates, since corrupt individuals may be unwilling to invest in subject expertise to gain access.

To understand the potential and limits of merit recruitment as a corruption-curbing institution, future research would thus do well to disentangle empirically which of these distinct theoretical mechanisms holds in practice in which contexts.

No less important, the literature provides little guidance on *which* recruitment and selection modalities, in fact, are at cause. At the most aggregate level, it remains unclear whether recruitment modalities – such as a switch to public competition for positions and thus a change in the pool of available candidates away from party affiliates – or selection modalities – such as written or oral examinations, or other types of assessments – underlie the effect on corruption. Existing research provides little guidance on these, from the perspective of policymakers, crucial questions.

#### Remuneration

Existing studies of remuneration – and HRM and corruption at-large – have mostly focused on the effects of pay *levels*. Theoretically, scholars have argued that higher wages (including future wages and other delayed rewards such as pensions appropriately discounted) raise the opportunity cost of corruption for the perpetrator if caught. This is the 'shirking model,' and the associated 'efficiency wage' examined in van Rijckeghem and Weder's (2001) prominent study. Alternatively, officials' corruption intent may also be affected by whether officials are able to live from their salaries without having to resort to corrupt income and consider their salaries to be 'fair' (van Rijkeghem and Weder 2001). At the same time, however, higher pecuniary

rewards have also been argued to crowd out pro-social motivation and make officials *more* corruption prone (Navot et al., 2015).

Empirical evidence for the link between pay levels and corruption is mixed. Observationally, Van Rijckeghem and Weder (2001) find a negative correlation between wage levels and corruption, though this is not robust to a fixed effects specification. Rauch and Evans (2000), Dahlström et al. (2012) and Treisman (2000) do not find a correlation between wages and corruption in their cross-sections of countries. Alt and Lassen (2003) and Dong and Torgler (2013) in turn find a negative correlation in a cross-section of American states and a panel of Chinese provinces respectively. A few studies even find a positive correlation between country public wage levels and corruption (Karahan et al. 2006; Navot et al. 2015). Finally, Di Tella and Schargrodsky (2003) find that wage levels are negatively associated with corruption but only when auditing intensity is at intermediate levels. Experimental work to-date is similarly mixed, finding that remuneration and corruption are either inversely related (Veldhuizen 2013; Armantier and Boly 2011; cf. Azfar and Nelson 2007) or unrelated (Barr et al. 2009).

In sum, the literature provides important theoretical arguments linking pay levels with corruption, albeit mixed evidence in regards to their validity. This may not surprise: the effect of pay levels on corruption may well be context-specific, depending on a range of other factors. One set of context factors is likely to consist of other aspects of pay systems. How large is pay progression (or compression) from bottom to top levels? How predictable is salary progression? How equitable is salary setting between public officials with similar responsibilities? To what extent is pay determined by performance, rather than other factors such as political proximity or seniority? Whether public servants consider their salary as fair, whether they perceive their long-run income to be sufficient to meet household needs, and how large the opportunity costs of corruption are to them all depend on not only pay levels, but also these other features of public pay systems. Yet, to-date, studies of corruption have omitted to study them.

## Promotions, Career Systems, Performance, and Transfers

Evidence for HRM functions beyond recruitment and remuneration is only provided in isolated studies.

Promotion systems have been studied in select works, typically with a view to assessing whether closed Weberian career systems are more effective than open systems in curbing corruption. The evidence on internal promotions is mixed. Rauch and Evans (2000) and Dahlström et al. (2012) find no evidence linking them to lower corruption. Recanatini et al. (2005) do find such evidence, but are unable to distinguish between recruitment and promotion. Whether outsiders may compete for higher-level jobs is, of course, but one of many characteristics of promotion systems. Beyond the issue of the candidate pool, promotion criteria and methods may matter. Importantly, performance-based promotions may be useful as an anti-corruption tool if corrupt behavior trades off against measured performance (Kwon 2014). Employees striving for promotions may not risk prioritizing corrupt gains over meeting standards. A similar point applies to performance evaluations. If evaluative standards do not permit sleaze or corruption, corruption may become less attractive (Segal 2002). Promotion

standards may, however, also induce corruption. Analogous to recruitment and selection, promotion can be subject to undue political control or pressure. Where career prospects improve for employees when they "steal for the team," promotion opportunities can incentivize party-directed corruption (Gingerich 2013). Moreover, seniority-based promotions may affect corruption incentives. In particular, where career advancements are determined solely based on seniority and unrelated to performance, incentives for employees to dismantle performance-reducing corrupt systems are stomped (Segal 2002, 448). At the same time, seniority-based promotions may curb corruption by protecting employees from political pressure and enhancing the predictability of future pay rises – and thus opportunity costs of corruption.

Empirically, only indirect evidence for any of these assertions is available. Kwon (2014) associates favorable attitudes towards performance-related promotion with less permissive attitudes towards corruption in a sample of South Korean public servants. However, in his study, it is not possible to separate the effect of promotions from the associated pay raise. Charron et al. (2017) find that a proxy for corruption in public procurement in European regions is associated with a view among public servants that hard work, as opposed to luck or connections, contributes to success in the public sector. Their analysis thus provides indirect evidence that merit-based promotion incentives can help reduce corruption. Vice versa, Gingerich (2013) finds that officials with a chance of future political careers are more willing to "steal for the team;" and Ting and Xiao (2016) show that the need to please superiors in the web of relations within the Chinese bureaucracy tempts lower-level employees into position-related extravagance. On the other hand, Herron et al. (2016) find in a study of Ukraine's electoral administration that professionalization of higher administrative tiers, which they argue is a function of promotion practices, co-exists with (a proxy for) corruption.

Thus, there is no guarantee that promotion opportunities reduce corruption; instead, the effect of promotions appears to depend on the criteria upon which promotion decisions are made. Direct evidence for whether this assertion holds empirically is, however, still lacking. Important avenues for future research thus remain.

The same holds for a related topic, personnel transfers. Classically, Wade (1982; 1985) argued that the strategic use of transfers was a major propellant of corruption in India's bureaucracy. Like promotions, superiors can use the promise of favorable transfers to tempt public servants into participation in corrupt transactions or networks; and the threat of involuntary transfer to posts in undesirable locations or handling undesirable tasks to push hesitant public servants into corruption.

While these are plausible arguments, we only have scant, qualitative evidence for them to-date. Moreover, little remains known about other relevant aspects of transfer systems, including whether the frequency of transfers affects corruption, or whether transfers are undertaken within- or also between organizations and sectors.

Summing up, existing studies do point to several plausible links between different aspects of promotion, performance and transfer systems and corruption. Empirical evidence is thin, however, and many aspects of promotion and transfer systems remain unexplored. This is this thus an HRM area that is, with respect to corruption, ripe for study.

## Job Stability and Tenure Protection

Tenure protections and job stability have been linked on a theoretical level to both lower and higher corruption.

Early public administration research considered protection from politically motivated dismissal a key guard post against undue political pressure and consequent unethical or corrupt behavior. If elected officials are free to dismiss employees, they may be able to pressure them into politically motivated corruption (Neshkova and Kostadinova 2012; Rubin and Whitford 2008). Beyond creating a bulwark against political pressure, employment protection contributes to a central Weberian bureaucracy characteristic that may further contain corruption: job stability. Job stability paves the way for long-term socialization processes, which may help establish an *esprit-de-corps* that can curb corruption (Bersch et al. 2017; Dahlström et al. 2012; Rauch and Evans 2000). In addition, the expectation of a stable public service career, as opposed to a short or uncertain appointment, may make employees less prone to take the risk of short-term corrupt gains (Bersch et al. 2017; Heywood and Meyer-Sahling 2013; Herron et al. 2016).

Employment protections may, however, also have the opposite effect. While employees are protected from political pressure to engage in corrupt activities, they are also protected against dismissal unless unlawful behavior can be proven, which is often difficult for covert behavior such as corruption (Oliveros and Schuster 2017). Hence, while employment protection can protect honest employees from corrupt politicians and managers, it can also protect corrupt employees from honest politicians and managers (Segal 2002). If this happens, the long-term socialization from job stability may be ineffective as colleagues do not report colleagues, or backfire when veterans socialize newcomers into corrupt behavior (de Graaf and Huberts 2008).

Furthermore, for public employees with frequent contact to a fixed set of clients, job stability improves opportunities to build relationships and networks for corrupt transactions (Choi 2007; de Graaf and Huberts 2008; Jancsics and Jávor 2012; Sundström 2016). On the other hand, however, networks may also be important for corruption containment as it permits potential whistleblowers access to information sharing through informal channels (Navot and Cohen 2015).

Theoretically, we may thus expect the effects of employment protection and job stability to be highly context dependent. It depends in part on whether such protections shield principled agents from unprincipled principals, or unprincipled agents from principled principals. Empirically, the evidence is thin. Rauch and Evans (2000), Dahlström et al. (2012), and Rubin and Whitford (2008) find no significant associations between job stability and corruption in cross-sectional country-level data. Similarly, in a conjoint experiment in the Dominican Republic, Oliveros and Schuster (2017) do not identify a significant effect.

In sum, the literature on employment protections and job stability provides plausible arguments that their effect depends, but little empirical evidence to back them up. Assessing these arguments empirically thus remains an important field of inquiry. Furthermore, there is a need to engage with the contextual complexities of how stable careers and employment protections interact with other HRM functions. Employment protection, for instance, is sometimes granted to "blanket in" political appointees to protect them from succeeding governments. The theoretically corruption propelling effects of political appointments may thus interact with the theoretically corruption containing effects of employment protection. The literature to-date is silent on these types of interactions.

#### Lessons from the Literature

At least four broad lessons about civil service management practices and corruption may be drawn from the literature.

First, the only theoretically and empirically (relatively) robust relationship in the literature is between merit recruitment and corruption. Where employees are recruited based on their professional merit – rather than political or personal criteria – they tend to be less corrupt. This may be because of the emergence of an *esprit-de-corps*, reciprocal accountability or greater shelter from political pressure, among other mechanisms. Which of these mechanisms hold empirically in what contexts remains unclear, however. Moreover, which practices are required to bring about merit recruitment in weak institutional contexts – be these different recruitment (e.g. public competition) or different selection (e.g. written examinations or interviews) mechanisms – remains largely unclear. This is a curious omission in the literature. Knowing through which recruitment and selection methods corruption can be curbed is arguably more actionable to policymakers than knowing to select professionally qualified employees.

Second, studies have associated pay levels with corruption, both theoretically and empirically. Nonetheless, the relationship between pay levels and corruption remains contested. This could well be as the effect of pay levels on corruption is likely to depend on how the pay system atlarge is structured, including how large and predictable pay progression is, how equitable salary setting between public officials is, and whether salaries are determined based on qualifications, performance, seniority or political and personal relations. Future studies would thus do well to assess the effect of – and provide evidence to policymakers on – public pay characteristics beyond pay levels.

Third, the literature provides only limited evidence for the effects of other HRM functions, such as promotions, transfers, or job stability protections. Other core areas of civil service management, such as performance appraisals, do not seem to have been researched at-all in relation to corruption (Kwon 2014 is a partial exception). These are important omissions. How promotions, transfers, performance appraisals or job stability are managed may well affect bureaucratic corruption more forcefully than, for instance, initial recruitment. To illustrate, how important is initial non-meritocratic recruitment to a middle manager after twenty years of working in her agency? We know surprisingly little about whether and how more temporally proximate, relative to more temporally distant, personnel management decisions affect corruption.

All of this suggests that the literature would greatly benefit from considering a broader set of personnel management practices in the study of civil service management and corruption. When doing so, the literature can also shift towards greater consideration of the interdependency of distinct civil service management practices. The effect of any given civil service management practice on corruption is likely to depend on other civil service management practices in place. The challenge for studies is thus clear: develop and robustly assess middle-range theoretical arguments around the effects of civil service management practices that take into account these context-specificities.

Our review of the literature also suggests lessons for *how* scholars may methodologically best shed light on these substantive questions. Early scholarship on civil service management and corruption largely drew inferences from qualitative research and country-level correlations

(e.g. Rauch and Evans 2000; Segal 2002). Yet, studying whether and how varying and interdependent civil service management practices affect corruption frequently requires organizational or individual level data on civil service management and corruption. To obtain such data, recent studies have usefully turned towards surveying public servants to improve inferences about the effects of civil service management practices (e.g. Gingerich 2013; Meyer-Sahling and Mikkelsen 2016; Oliveros and Schuster 2017).

Since corruption is a sensitive subject, this approach, of course, has its own pitfall: survey responses to corruption questions may suffer from bias. Recent studies point to two solutions: survey experimental methods, such as list experiments, randomized response techniques and conjoint experiments (e.g. Gingerich 2013; Oliveros and Schuster 2017); and the use of 'big data' proxy measures for corruption, such as measures of competition in public procurement (Charron et al. 2017).

These methodological innovations have clear potential to improve corruption measurement and inferences about the effects of civil service management practices. At the same time, they are no panacea. Survey and administrative measures arguably remain imperfect tools to identify effects of management practices which have complex and potentially unanticipated context-dependent effects. As detailed in the next section, they also fall short of strong causal identification by themselves. Other research designs – including qualitative research – will thus continue to play important roles in furthering our understanding of civil service management and corruption.

## An Agenda for Future Research on Civil Service Management and Corruption

Public servants are central to almost all corruption. Not studying how the management of public servants shapes corrupt behavior implies missing an important opportunity to gather actionable evidence to reduce corruption.

This review article suggests existing research does well to provide insights on some aspects of civil service management, albeit not others; and does well to draw on an increasingly innovative – albeit still incomplete – set of methodologies. The article thus concludes with a call to research neglected areas in civil service management and anti-corruption, and to do so with a more encompassing and plural set of methodological approaches.

We see as the first – and most obvious – future area for research the study of civil service management functions whose effects have been neglected in the literature to-date. While merit recruitment and pay levels have seen some research, rigorous evidence on the effects of other civil service management practices – such as promotions, transfers or job stability protections – remains scarce to non-existent. Moreover, other aspects of pay and recruitment – such as pay equity or the effects of recruitment versus selection methods – remain unexplored.

Moving towards the study of a broader range of civil service management practices would also enable researchers to address context-specific effects more seriously. Interdependencies with organizational context and other civil service management practices are likely to loom large. To cite just two examples: the effects of job stability may well depend on whether public servants are recruited based on merit or personal connections; and the effects of higher pay

levels on whether seniority, performance or favoritism determine pay increases. To tease out how variation in context shapes effects, future research would greatly benefit from studying the effects of civil service management practices across contexts, for instance, across institutions or countries.

Several methodological approaches hold promise in this regard. Qualitative studies can shed important light on unanticipated interaction effects and on the mechanisms through which specific civil service management practices achieve a reduction (or increase) in corruption. They can also be useful in describing civil service management practices in sufficient depth to enable actionable recommendations to policymakers. Surveys of public servants in turn can provide statistical associations between civil service management practices and corruption, moderated by organizational contexts and practices. This approach is particularly insightful where it is undertaken across country contexts and draws on recent advances in experimental or administrative measures of corruption.

Scholars seeking statistical causal identification will, of course, wish to go beyond associations towards field experiments, regression discontinuity designs (RDDs), or (other) instrumental variables. Strong causal identification has been a blind spot in the literature to-date (with few exceptions, e.g. Armantier and Boly 2011; Barr et al. 2009; Oliveros and Schuster 2017). As table 1 above shows, experiments are few and far in between and mostly concentrated in economics journals. This is even though research on other outcomes – such as motivation – underscores the feasibility of such approaches (Dal Bó, Finan and Rossi, 2013). Bringing them to the study of civil service management and corruption could thus yield large payoffs. Their applicability is likely to be constrained, though. Practical and legal obstacles may preclude randomizing many civil service management practices, such as job stability; and strong instruments and discontinuities are challenging to identify.

Delivering on a boundary-pushing agenda which addresses the many gaps in our understanding of civil service management and corruption thus requires a substantially and methodologically plural way forward. Policy makers looking to address bureaucratic corruption would stand to benefit.

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# Online Appendix Civil Service Management and Corruption: What We Know and What We Don't

Jan-Hinrik Meyer-Sahling Kim Sass Mikkelsen Christian Schuster

#### Introduction

This appendix lists the materials reviewed in the paper "Civil Service Management and Corruption." To select review subjects, we searched abstracts for nine journals in public administration and management and political science published since 2000 and containing the term corruption and its variations (searching using the truncation corrupt\*). Next, we exclude all articles that either were not empirical investigations or did not have corruption as their dependent variable. Subsequently, we excluded articles that did not focus on an aspect of classical personnel management on the independent variable side. Finally, using the same criteria, we checked (1) the references in the selected articles and (2) other materials citing the selected articles (for books, we read the first chapter of the book to judge relevance, chapters we read in full, some works either not in English or not available to us we do not consider).

This appendix shows three lists. First, the list of articles we selected from the nine journals: Public Administration, Public Administration Review, Journal of Public Administration Research and Theory, Governance, International Public Management Journal, American Journal of Political Science, American Political Science Review, The Journal of Politics, and Comparative Political Studies. Second, the list of articles, working papers, chapters, and books we selected from the the references in the articles in the first list. Finally, the list of articles, working papers, chapters, and books we selected from the works citing articles in the first list on Scopus or Web of Science. For articles of newer date (2013 or later), we also did an open Google Scholar search for citing materials. Important work in the literature that we were aware of but did not reach using this search, we also included in the review (these are listed in the bibliography but not in the search mapping below). Altogether, we review 62 studies, most of which (57) are published journal articles.

In some instances, we reviewed material that we decided not to include in the paper this appendix accompanies (these are marked NI in the lists below). Mostly, these materials either had little empirical investigation or contributed little to the discussion in our paper beyond what other materials contain. Of the 57 studies, 36 are cited in the paper this appendix accompanies).

The appendix ends with a complete bibliography of all materials and some descriptive statistics on their outlets, coverage, and tools.

## Articles from searched journals:

#### **Public Administration**

Meyer-Sahling and Mikkelsen (2016)

Sundström (2016)

#### **Public Administration Review**

Choi (2007)

De Graaf and Huberts (2008)

Neshkova and Kostadinova (2012)

Segal (2002)

## Journal of Public Administration Research and Theory

Kwon (2014)

#### Governance

Bersch, Praça, and Taylor (2017)

Engvall (2015)

Gong and Xiao (2016)

Herron, Boyko, and Thunberg (2016)

Navot and Cohen (2015)

### **International Public Management Journal**

Jancsics and Jávor (2012)

Rubin and Whitford (2008)

#### American Political Science Review

#### American Journal of Political Science

## The Journal of Politics

Charron et al. (2016)

### **Comparative Political Studies**

Oliveros and Schuster (2017)

## Sources cited by the selected articles:

#### **Public Administration**

Meyer-Sahling and Mikkelsen (2016)

- Dahlström, Lapuente, and Teorell (2012)
- Gingerich (2013)
- Heywood and Meyer-Sahling (2013)
- Rauch and Evans (2000)
- Treisman (2000)
- Van Rijckeghem and Weder (2001)

#### Sundström (2016)

- Rauch and Evans (2000)
- Simser (2011) (NI)
- Sundström (2015) (NI)
- Van Rijckeghem and Weder (2001)

#### **Public Administration Review**

Choi (2007)

No sources

De Graaf and Huberts (2008)

- Ahmad and Brookins (2004) (NI)
- De Graaf (2007) (NI)
- Treisman (2000)

Neshkova and Kostadinova (2012)

- Gorodnichenko and Peter (2007) (NI)
- Rauch and Evans (2000)
- Recanatini, Prati, and Tabellini (2005)
- Van Rijckeghem and Weder (2001)

#### Segal (2002)

No sources

## Journal of Public Administration Research and Theory

Kwon (2014)

- Di Tella and Schargrodsky (2003)
- Van Rijckeghem and Weder (2001)

#### Governance

Bersch, Praça, and Taylor (2017)

- Praça and Taylor (2014) (NI)
- Rauch and Evans (2000)
- Zimmerman (2008) (NI)

Engvall (2015)

- Engvall (2012) (NI)
- Kristiansen and Ramli (2006) (NI)
- Zhu (2008) (NI)

Gong and Xiao (2016)

- Guo (2010) (NI)
- Venard (2009) (NI)

Herron, Boyko, and Thunberg (2016)

- Heywood and Meyer-Sahling (2013)
- Miller, Grødeland, and Koshechkina (2001) (NI)
- Oka (2015) (NI)
- Treisman (2007)

Navot and Cohen (2015)

- Beeri and Navot (2013) (NI)
- Della Porta and Vannucci (2012) (NI)
- Fritzen (2005) (NI)
- Heywood and Meyer-Sahling (2013)

## International Public Management Journal

Jancsics and Jávor (2012)

- Cepiku (2004) (NI)
- De Graaf and Huberts (2008)
- Doig, Watt, and Williams (2007) (NI)
- Kotchegura (2004) (NI)
- Miller, Grødeland, and Koshechkina (2001) (NI)

- Nielsen (2003) (NI)
- Treisman (2000)

#### Rubin and Whitford (2008)

- Filmer and Lindauer (2001) (NI)
- Painter (2003) (NI)
- Temu and Due (2000) (NI)
- Van Rijckeghem and Weder (2001)

#### American Political Science Review

#### American Journal of Political Science

## The Journal of Politics

Charron et al. (2016)

- · Dahlström, Lapuente, and Teorell (2012)
- Gingerich (2013)
- Rauch and Evans (2000)
- Treisman (2007)

## **Comparative Political Studies**

## Sources citing selected articles

(Additional searches using Google Scholar, all papers after 2013, are marked with asterisks)

#### **Public Administration**

Meyer-Sahling and Mikkelsen (2016)\*

No sources

Sundström (2016)\*

No sources

#### **Public Administration Review**

De Graaf and Huberts (2008)

· Dahlström, Lapuente, and Teorell (2012)

- Jancsics and Jávor (2012)
- Jiménez, Villoria, and Quesada (2012) (NI)

Neshkova and Kostadinova (2012)

No sources

Segal (2002)

No sources

## Journal of Public Administration Research and Theory

Kwon (2014)\*

- Meyer-Sahling and Mikkelsen (2016)
- Navot, Reingewertz, and Cohen (2016)

#### Governance

Bersch, Praça, and Taylor (2017)\*

No sources

Engvall (2015)\*

- Oka (2015) (NI)
- Herron, Boyko, and Thunberg (2016)

Gong and Xiao (2016)\*

No sources

Herron, Boyko, and Thunberg (2016)\*

No sources

Navot and Cohen (2015)\*

• Navot, Reingewertz, and Cohen (2016)

## International Public Management Journal

Jancsics and Jávor (2012)

Jancsics (2015) (NI)

Rubin and Whitford (2008)

No sources

#### American Political Science Review

#### American Journal of Political Science

#### The Journal of Politics

Charron et al. (2016)\*

No sources

## **Comparative Political Studies**

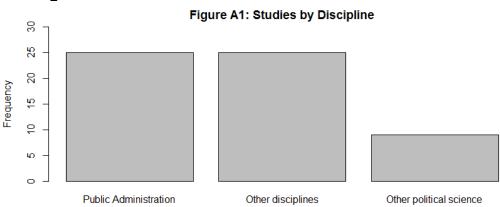
Oliveros and Schuster (2017)

· No sources

#### Additional sources

- · Alt and Lassen (2003)
- Armantier and Boly (2011)
- Azfar and Nelson Jr (2007)
- Banerjee, Baul, and Rosenblat (2015)
- Barr, Lindelow, and Serneels (2009)
- Dong and Torgler (2013)
- · Karahan, Razzolini, and Shughart II (2006)
- Van Veldhuizen (2013)
- Wade (1982)
- Wade (1985)

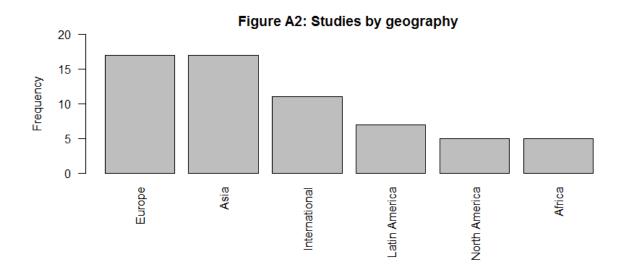
## Descriptive statistics:



Studies by discipline

Figures A1-A3 show the distribution of the reviewed studies by discipline, geographical region, and methods.

Figure 1 divides studies along disciplinary lines, classified based on the journal in which they are published. Books and unpublished papers (5 in total) are exempt. The figure shows that nearly half (25) of the materials we review are articles published in public administration journals, while a smaller portion (9) are published in other subfields of political science. The remaining materials (26) are published in journals outside political science most notably economics (12).



#### Studies by region

Figure 2 shows the geographical distribution of reviewed studies. The geographical focus is first on Asia (17) and Europe (17), followed by a group of studies - labelled "international" - either including data from countries from multiple regions or cross-national comparisons (11).

Quantitative Quantitative (experimental)

Figure A3: Studies by method

Studies by method

Finally, figure 3 shows the distribution of methods used in the reviewed studies. About half (33) use statistical tools, 6 of these rely on experiments. The other half (29) is qualitative in nature.

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