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Reference:

Wynen Jan, Kleizen Bjorn, Verhoest Koen, Lægreid Per, Rolland Vidar.- Keeping a watchful eye in times of turmoil? How repeated structural reform leads to more attention to political signals
Public administration / Royal Institute of Public Administration [London] - ISSN 0033-3298 - Hoboken, Wiley, 2020, p. 1-21
Full text (Publisher's DOI): <https://doi.org/10.1111/PADM.12653>
To cite this reference: <https://hdl.handle.net/10067/1655110151162165141>

Keeping a watchful eye in times of turmoil? How repeated structural reform leads to more attention to political signals.

Abstract: An important rationale for the creation of semi-autonomous agencies is to create some distance between politics and administration. As such, agencies are expected to shield policy implementation from the daily concerns of political life. However, political actors and politically controlled ministries still influence agencies in various intended and unintended ways. This article focuses on intensive long-term series of structural reforms and how they may undermine the original design philosophy underpinning agencification. We utilize a dataset combining staff surveys and a structural reform database to perform multilevel analyses of employees nested in organizations. We find that the frequency with which agencies have experienced structural reform affects the weight that employees attach to signals from political and ministerial principals. Frequent structural reform may lead to heightened perceptions of the importance of political signals. Hence, frequent structural reforms may increase the risk of political influence on agencies that were designed to operate impartially.

Keywords: structural reform, political signals, agencies

1. Introduction

One of the rationales for the creation of semi-autonomous public organizations is to increase the distance between politics and administration. Not only does imbuing an organization with a given degree of formal autonomy provide a signal of credible commitment (Gilardi, 2002), it also serves to emphasize that the organization should operate at some distance from politicians and politically-lead sections of government (such as ministries or departments) (Majone, 1997; Egeberg & Trondal, 2009). As such, the semi-autonomous agency is an organization form that can be used to shield policy implementation from the short-term priorities of political life (Majone, 1997; Busuioc, 2009). Thus, many agencies are created on the assumption that, both *de jure* and in practice, they will operate beyond the daily purview of politicians and politically controlled parent ministries. This would provide these agencies with the ability to operate impartially and prioritize professional values and cues from non-political actors such as citizens and companies (Hood & Lodge, 2008, 30-31).

However, previous work already indicates that political actors have a strong urge to steer their implementing organizations, even when these organizations are placed at some distance from the government ('t Hart & Wille, 2006; Kleizen et al., 2018). As many formal control mechanisms that allow for *ad hoc* steering, such as the competence to provide direct and binding instructions, are unavailable towards formally autonomous agencies, political actors may resort to intervening through structural reforms altering the tasks, legal statute and organizational framework underpinning the agency (Carpenter, 1996; Hood & Lodge, 2008, 184; Terman, 2014; Zito, 2015). Such imposed structural reforms often coincide with various structural reforms developed by the agency itself, in some cases creating series of disruptive and contradictory reform (Pollitt, 2007).

Research in organizational psychology and the management sciences has shown that even single structural reforms generate substantial levels of uncertainty and cognitive stress

(e.g. Bordia et al., 2004), while multiple reforms is associated with higher levels of uncertainty (Rafferty & Griffin, 2006). Threat-rigidity theory suggests that, under such uncertain and stressful circumstances, individuals will avoid additional uncertainty, causing the organization becomes risk-averse, more centralized and more formalized (Staw et al., 1981; Van Hootehem et al., 2019). This paper builds on these insights by considering whether we may expect agency employees that have experienced longer structural reform histories to more closely monitor their political and administrative principals. We argue that such employees are likely to place increased emphasis on signals from the government, the competent minister or state secretary and his/her ministry or political advisors – which we will refer to as political signals for purposes of succinctness – to anticipate and prevent additional turmoil (Terman, 2014; ‘t Hart & Wille, 2006). Thus, we argue that when an agency is reformed too frequently, a situation may arise in which the effort to insulate an organization from political life is (partially) undone by the psychological processes produced by the reform fever confronting said organization (Kleizen, et al., 2018).

Although not all agencies are created with the intent of insulating them from political interference (with some agencies even being created to increase political control (Park & Joo, 2010)), such a positive effect of repeated structural reform on attention devoted to signals could be detrimental in cases where impartiality and credible commitment are considered important. To provide a concrete example: supervisory and enforcement agencies (such as competition law agencies) are often imbued with substantial formal autonomy in an attempt to legitimate their output and mitigate concerns over potential biases that political actors may have on these agencies’ enforcement decisions (Norwegian Competition Authority, 2016). This autonomy thus aims to ensure that norm addressees are treated impartially and with regard for due process, as supervisory and enforcement action often results in significant alterations to citizens’ and/or

organizations' rights and obligations (NCA, 2016; Rothstein & Teorell, 2008; Egeberg & Trondal, 2009; Barron, 2008).

However, a supervisory agency having recently experienced a severe reform trajectory may wish to prevent – or at least anticipate – further turmoil by closely monitoring the preferences and communications of its principals, including the government, the competent minister or state secretary, as well as the competent ministry. Within the agency, social cues and hierarchical instructions to take heed of a political signal may reach various levels of civil servants, allowing the effect to manifest not just on the senior-manager level, but also in mid-level and rank-and-file inspectors and policy officers. This introduces the risk of political influence on what were intended to be impartial and expert-based considerations, policies and decisions (e.g. withholding, delaying or slightly reframing sensitive reports, decisions or investigations).

Moreover, while one might argue that changing the organization's overarching course to match the preferences of its political principals might be the goal of some structural reforms (e.g. Carpenter, 1996; Zito, 2015), it is likely that altering the individual-level attentiveness to political signals of civil servants is an unexpected side-effect (Kleizen et al., 2018). In particular when a history comprising frequent structural reform increases this effect, it is likely that at least some of these structural reforms were not intended to alter the degree to which individuals within the organization devote attention to political signals.

In sum, we expect that when organizations are confronted with *frequent* structural reforms in their relatively *recent histories*, both the organization's senior management and its employees may attribute more weight to signals from politicians and parent ministries than they would when an organization's history of structural reforms is relatively modest. To analyze this expectation, we run hierarchical regression analysis on a dataset combining data from the Norwegian State Administration Database (NSAD) on the frequency and recentness of

structural reforms that organizations have experienced throughout their lifetime with survey data on the importance of signals provided by politicians and parent ministries as perceived by civil servants within Norwegian semi-autonomous agencies. The next section of this paper will explore theoretical mechanisms, while section three will elaborate on the data used. Sections four and five will respectively be devoted to the analysis and discussion of the data, after which several concluding remarks round up the paper.

2. Theoretical framework

2.1. Political signals and their interpretation in (repeatedly reformed) agencies

Despite being semi-autonomous, agencies are normally required to monitor signals from their political superiors to at least some degree, as they remain subject to various accountability and control mechanisms and dependent on political and ministerial decision-making. Simultaneously, however, disaggregating agencies to some extent implies a balancing exercise between the degree to which the agency emphasizes political signals and the degree to which the agency is capable of and willing to pursue its own direction (Christensen & Lægveid, 2007). In particular where an agency is required to be (seen as) impartial in the execution of its tasks (see on impartiality e.g. Rothstein & Teorell, 2008), as is often the case for e.g. supervisory, arbitration, independent advisory and enforcement entities, it may be undesirable for its civil servants to emphasize political signals too strongly (e.g. NCA, 2017). Thus, the ‘right’ level of emphasis placed on signals may differ between public organizations, depending *inter alia* on their tasks and formal relationship with the broader public sector.

The extant literature on political signals implicitly assumes that the degree to which organizations devote attention to such signals is a constant, with agency response merely being conditional upon the degree to which signals are used to control the agency (e.g. Carpenter, 1996, Terman, 2014). However, taking inspiration from the related literature on perceived (or

de facto) autonomy, i.e. the literature investigating the degree to which organizations believe they are able to take decisions themselves, it may be argued that both organizations and individuals within organizations vary on the degree to which they perceive signals from political and administrative principals as important (e.g. Verhoest et al., 2004; Maggetti, 2007; Bach, 2010). Severe disruption (e.g. in the form of repeated structural reform) within an agency may make both its senior management and subordinate civil servants increasingly risk-averse ('t Hart & Wille, 2006). While *de facto* autonomy scholars have found that such disruption may thus reduce perceptions of autonomy (Kleizen et al., 2018),¹ we posit it is also likely that they may increase the attention devoted to signals, as the organization's management attempts to safeguard the organization's stability.

This is where we expect the underlying link between repeated structural reform and importance attached to political signals is likely to manifest. As the amount of structural reforms increases, the resulting turmoil may generate heightened levels of risk-averseness. As a result, the organization becomes less likely to maintain a fully unconstrained position in terms of the signals it takes into account ('t Hart & Wille, 2006), with individuals in the organization perceiving a need to pay increased attention to political signals to detect, anticipate and possibly prevent further turmoil (Dommett & Skelcher, 2014). This may inadvertently result in formally autonomous agencies operating in a way that takes into account political considerations. Although such a change in the relationship between an organization and its superior is not always problematic, it may be undesirable where an agency was explicitly set up to be impartial or to emphasize non-political signals (Rothstein & Teorell, 2008). Sub-section 2.2 elaborates on threat-rigidity theory, an organizational-psychological theory that comprehensively explains the potential link between repeated structural reform and importance attached to political

¹ We treat *de facto* autonomy and perceived importance of political signals as separate, albeit likely correlated concepts. While perceiving political signals as important is likely a predictor of *de facto* autonomy, we believe it is possible that an entity would heavily monitor political signals whilst also exhibiting perceptions of high levels of autonomy, for instance if it has an audit role vis-à-vis politicians and ministries.

signals. Although data-limitations unfortunately mean that we cannot measure this underlying theoretical mechanism, it provides a likely explanation for the effects of repeated structural reform on perceived importance of political signals presented in section 4.

Before discussing this theoretical link, however, it is relevant to discuss our conceptualization of political signals. Given that civil servants may pick up signals from a wide variety of sources, we are required to acknowledge the possibility of political actors using an array of informal signals or formal signals not embedded in control mechanisms. Political actors may for instance provide signals on policy preferences through the media, reports and white papers or in direct contact with a bureaucracy's managers and/or policy officers (e.g. Zito, 2015; 't Hart & Wille, 2006). Signals may also manifest in parliamentary debates, with for instance the minister or state secretary or a political advisor making a statement on the agency's level of performance or a preferred new policy direction. Alternatively, the preference of ministers and parties may be passed down through ministries, with parent ministry officials acting as an intermediate step in relaying political programs to agency employees (Zito, 2015; 't Hart & Wille, 2006). In this sense, parent ministries in many countries may, to some degree, act as an extension of their political leaders, translating the views of the incumbent government into policy actions and communication. This is particularly relevant to take into account for countries such as Norway, where a strong reliance on the principle of ministerial responsibility creates comparatively strong sectoral ministries (Greve & Ejersbo, 2016, p.48). Given that signals may thus be transmitted through a variety of platforms and mechanisms, we define political signals broadly as: 'signals relevant to the organization and/or a civil servant's functioning, provided by the organization's superior politicians and/or sections of the bureaucracy directly under political control'.

2.2. Threat-rigidity effects following structural reform

The theoretical link between series of structural reforms and perceived importance of political signals is provided by threat-rigidity theory. This theory posits that when an organization confronts severe threats, it may undergo a multifaceted process consisting of effects on both the individual and the organizational level, which lead to increased rigidity, centralization and formalization (Staw et al., 1981; Boin & Otten, 1996; D'Aunno & Sutton, 1992; Daly et al., 2011; Niesen et al., 2014). The theory predicts that individuals in intensively and frequently reformed organizations are likely to experience high degrees of uncertainty, anxiety and stress (Staw et al., 1981). Such uncertainty, anxiety and stress introduce tendencies towards risk-averseness and reduces individuals' capacity to focus on peripheral informational cues (Staw et al., 1981; Daly et al., 2011). Through these effects, individuals throughout the organization's hierarchy are likely to become more focused on their immediate superior's preferences and less inclined to speak up regarding concerns or to provide a proactive contribution to organizational decision-making (Olsen & Sexton, 2009).

Although individuals in all levels of the organization may thus exhibit threat-rigidity effects, the implications of these effects for the organization may differ slightly depending on the level of decision-making. We therefore first discuss its implications on the senior manager level, before turning to the remainder of the organization.

Threat-rigidity effects at the senior manager level

For senior managers, the threat-rigidity effect implies devoting increased weight to the cues from their political and administrative principals. As the organization is unstable due to multiple ongoing and/or past structural reform processes, senior managers will tend to avoid causing additional uncertainty for themselves and the organization by closely managing their political and administrative principals' signals and preferences. This allows them to anticipate

issues, avert sanctioning (Busuioc, 2009), and, through this anticipatory behavior, avoid additional cognitive uncertainty at the personal level (Niesen & De Witte, 2014).

As threat-rigidity theory was primarily developed with private-sector organizations in mind, its original version only recognizes such behavioral responses as occurring within an organization (Staw et al., 1981). However, we propose that this relationship holds for external relations to principals in the public sector as well. We reason that, in the public sector, inter-organizational ties are particularly important: members of semi-autonomous organizations are part of a broader government with intricate links in terms of financing and resources (Busuioc, 2009) as well as accountability links towards the responsible minister or state secretary and – often through ministerial responsibility – democratically legitimated institutions (Flinders & Buller, 2006). Indeed, the principle of ministerial responsibility often causes political and administrative principals to become relatively involved with their subordinate organizations, in many cases despite the formal insulation that such an organization enjoys (e.g. Flinders & Buller, 2006; Nieuwenkamp, 2004; ‘t Hart & Wille, 2006; Busuioc, 2009; Zito, 2015).

Threat-rigidity effects on individuals in lower levels of the organization

In addition to the aforementioned effects on the level of an organization’s senior management, lower level employees will attempt to mitigate uncertainty by avoiding action that could lead to formal or informal sanctioning by their superiors (Olsen & Sexton, 2009; Wynen et al., 2019). This may include a reduced propensity to speak up regarding issues perceived as controversial, reduced levels of creativity, an increased focus on a civil servant’s core tasks and a reduced propensity to pick up peripheral cues (Staw et al., 1981; Amabile & Conti, 1999; Bommer & Jalajas, 1999; Olsen & Sexton, 2009). This risk-averse behavior on part of subordinates is amplified by senior- and middle management tendencies to centralize decision-

making, introduce pressures towards uniformity and introduce increased levels of formalization within their organization (Staw et al., 1981; Muurlink et al., 2012).

As the organization is confronted with uncertainty and threat due to the serial introduction of structural reforms, managers are likely to attempt to mitigate this uncertainty by shifting decision-making to higher-level groups, while granting lower echelons less freedom to operate autonomously and less opportunities to be included in decision-making processes (Olsen & Sexton, 2009). Combined with the risk-averse effects incurred at lower levels within the organization, these centralizing and formalizing phenomena inadvertently serve to reduce the organization's propensity to notice various peripheral cues and may introduce increased groupthink and tunnel vision, through which the emphasis on political signals may be increased (Staw et al., 1981; Amabile & Conti, 1999).

Thus, threat-rigidity theory expects a variety of effects on both the senior management and the lower levels of the organization that are likely related to an increased tendency to emphasize signals from superiors, both internal and external to the organization. We summarize the inter-organizational, senior management and lower level effects predicted by our adaptation of threat-rigidity theory in Figure 1. This figure illustrates that signals directly transmitted by the minister or the ministry to the organization's senior management will be emphasized more heavily following repeated, recent structural reforms, as senior management is confronted with uncertainty and threat and begins to behave risk-aversely. Moreover, internal centralization and formalization ensures that any lower level follow-up to the signal will also perceive it to be relatively important, while ignoring the signal may lead to sanctioning by the organization's management. Additionally, there are likely cases where signals do not pass through the managerial level, as lower level civil servants are for instance in direct contact with the minister or the ministry or receive a signal indirectly through e.g. the media. Nevertheless, as management begins to emphasize risk-averseness towards the political superior and attempts to

enforce compliance with political preferences, the interpretation of these signals are still likely to be influenced by threat-rigidity effects.

Please include Figure 1 here

Threat-rigidity effects during repeated reform

Moreover, we propose that as the organization is confronted with an increasing number of structural reforms in quick succession, we may also expect to observe a higher degree of formalization, centralization and attention towards political and administrative principals, i.e. the government, the competent minister or state secretary, political advisors and the competent ministry. Such a temporal dynamic of structural reform histories remains largely unexplored in the extant literature, although a small number of studies does provide evidence for its occurrence. The organizational psychological literature lines on job satisfaction and stress have for instance observed higher detrimental effects following repeated reform events (Moore et al, 2004), or as perceived degrees of organizational change increase. In this context, Rafferty & Restubog (2017) posit that repeated reforms may bring about a situation of perceived continuous change, with no seeming end to a reform process, which will generate higher levels of uncertainty than single-event reforms. Similarly, through the threat-rigidity effect, we may expect repeated structural reforms to increase the weight attached to signals from political and administrative principals beyond what we would expect from single-event structural reforms.

In sum, we expect that civil servants will perceive signals from ministries and the superior minister that have greater weight following series of recent structural reforms, and that is effect runs through increased internal centralization, formalization, sanctioning and risk-averseness towards the political level and towards internal superiors. Although some aspects of threat-rigidity theory will unfortunately be theoretically assumed due to data constraints, the

following sections will report results on the overarching proposition on emphasis placed on political signals, while also presenting supporting results that indicate the relevance threat-rigidity mechanism in repeatedly reformed organizations.

3. Data

We rely on Norwegian data to examine the impact of multiple structural reforms on the weight attached to signals from political and administrative principals. Despite being a reluctant reformer in the 1980s and 1990s, Norway is no longer characterized this way. Fast-paced reforms have involved NPM reforms but also New Public Governance and Neo-Weberian reforms in a layered manner. The most significant structural reforms made in Norway recently include hospital reforms (2001), welfare administration reforms (2007) and police reforms (2015). In contrast to those of many other European countries, the Norwegian reform trajectory has been rather successful (Greve, Lægreid and Rykkja 2016). The presence of such reforms implies that various Norwegian public organizations have undergone frequent structural reforms over the past decade, rendering this country a suitable case for studying the effects of series of structural reforms. Simultaneously, previous findings of autonomy studies suggest that Norwegian organizations generally consider themselves relatively autonomous compared to their counterparts in other Western states (Roness et al., 2008; Bach, 2014; Lægreid et al., 2006). As a variable that is likely correlated to perceived importance of political signals, this could imply that Norway is a relatively unlikely setting to observe a negative relationship between longer structural reform histories and perceived importance of political signals. Thus, finding evidence of a relationship in such an unlikely setting would tentatively suggest that results may hold in other democratic states.

Using the Norwegian State Administration Database (NSAD; <http://www.nsd.uib.no/polsys/en/civilservice/>) we were able to reconstruct, for all central state

agencies, all reforms in formal organizational structure from their founding until 2016 and is based on the work of Rolland and Roness (2011). State agencies are located directly beneath ministries as part of the central government. These state agencies form part of the civil service, but are structurally disaggregated from ministries. They carry out public tasks on a permanent basis, are staffed by civil servants, are subject to public law procedures, and are mainly financed through the state budget. They enjoy some autonomy from ministries in policy decision-making and implementation and in personnel, financial and managerial matters (Lægreid, Roness and Rubecksen 2006). The state agencies included in our sample have the following Norwegian-specific form of affiliation: “directorates, central agencies and other ordinary agencies outside the ministries which are the types most closely linked to the state centre and subject to general government regulatory frameworks” (Lægreid, Roness and Rubecksen 2006: 235). They are clearly Type 1 agencies as defined by Van Thiel (2012: 20), i.e. semi-autonomous organizations without legal independence but with some managerial autonomy.

The NSAD uses a predefined categorization that classifies structural reforms in three main categories: reforms related to the founding of an organization, reforms related to the survival or maintenance of an organization, and reforms related to the termination of an organization. As such, it takes an institutional legacy point of view (Dommett and Skelcher, 2014) in which the maintenance events act as an intermediate step between life and death (Rolland & Roness, 2011). Since we are interested in the effects of structural reforms that are imposed during the lifetimes of organizations, we leave all birth and death events out of consideration.

These data are coupled with information from a comprehensive web-based survey among civil servants within different Norwegian central state agencies. The survey is part of the Central Administration study and has been conducted every 10 years since 1976 (Christensen et al., 2018), with our study drawing mainly on the 2016 wave while also using the 2006 wave for replication purposes. The technical execution of the survey is managed by the Norwegian

Social Science Data Service (NSD) and the setup and funding of the survey is a collaboration between the University of Bergen, the University of Oslo the University of Agder. It contains information about individual demographic variables, structural variables, attitudes as well as data on the influence of political and administrative principals.

The 2016 wave includes a representative sample of 1963 respondents across 47 central state agencies, having a response rate of 59.5%. More precise information on the survey process, response rates per organization as well as on the validity of responses can be found on the website of the NSD (<http://www.nsd.uib.no/polsys/forvaltning/sentraladm2016.html>). The coupling of both data sources resulted in a final dataset of 918 employees within 38 central state agencies. To ensure that the reduction in observations did not introduce a bias, we compared the structural reform history of the 47 organizations included in the staff survey with the one of our subsample of 38 organizations. It is not unlikely that respondents of organizations with ‘turbulent’ structural reform histories are less prone to respond to survey questions regarding the influence of political and administrative principals. This non-response would consequently lead to an exclusion of such organizations from our sample. Hence, we compared the average number of structural reforms in our subsample with those in the original sample. Although the value in our subsample is slightly higher than that of the original sample (3.29 versus 3.04 (with a standard deviation of 3.03 versus 2.90)), the difference proves not to be significant ($t=.02$; $p=.98$). The structural reform history of our 38 organizations is consequently representative for the entire sample of 47 organizations.

Secondly, we a calculated a Representativity-indicator (*R-indicator or M()*) (see for a detailed discussion the related RISQ project²). Such an indicator is based on the standard deviation of estimated probabilities and is defined by:

$$M(\rho)= 1-2S(\rho) \quad (1)$$

² <https://www.emist.manchester.ac.uk/research/projects/representative-indicators-for-survey-quality/>

The probability for being in the smaller subsample or not were estimated by applying a simple logistic regression model using the variables age, gender, tenure, position, task and starting job as auxiliary variables. The smaller subsample is not representative if there is much variation in response probabilities. This is reflected by a large standard error. The maximum value the standard error can assume is 0.5. In this case the value of the R-indicator is equal to 0. For our subsample the value of the R-indicator (M()) is equal to 0.93, indicating that respondents in the subsample do not differ significantly from respondents in the original and representative sample. In short our subsample thus proves to be representative with regard to both individual respondents and organizations.

Moreover, while individual-level data could not be linked across different iterations of the survey, it was possible to use the 2006 data to provide both a replication and a robustness test of our initial results. The demographics and representativeness of this supplementary second dataset are similar to the main 2016 data (with the final 2006 subsample consisting of 48 organizations and 1093 individuals, representative for the broader population of individuals and organizations).³

3.1. Measuring the weight attached to signals from political and administrative principals

The weight attached to signals from political and administrative principals is measured using the following survey questions: “What weight do you add to each of the following considerations in carrying out your work tasks? A) Signals from political leadership (government, minister, state secretary, political advisors) & B) Signals from the ministry” On both A and B, respondents could answer using a 5-point Likert-type scale ranging from 1 (never) to 5 (very often).

³ Results for the R-indicator were also similar and are available on request

3.2. Creating an indicator for an organization's history of structural reforms

Using information from the NSAD, we found that organizations in our sample endured a total of 107 maintenance events during their existence (starting from the founding date of each organization until 2016 (year of the staff survey)) with the following distribution:

Please include Table 1 here

Note that the right hand side of the table reflect the percentage of organizations having experienced a specific type of reform. As organizations are likely to experience multiple reforms, the percentages in this column will not add up to 100%.

A first operationalization of *an organizations history of structural reforms* simply consists of the number of structural reforms an organization experienced.

However, just taking the sum of reforms per organization does have an important downside since each reform is given an equal weight. Recent reforms are consequently equal in value to reforms which have happened a longer time ago. Since this would lead to an overestimation of the effect of earlier structural reforms, we have added an operationalization which accounts for this issue. More specifically, this *second operationalization not only focuses on the number of reforms experienced but also takes the timing of each reform into account*. More specifically, we employ following formula for calculating a value for each specific reform:

$$\sum \left(\frac{\text{Year of reform event} - \text{Birthdate}}{\text{Age of the organization}} \right) \quad (2)$$

By taking the sum of all these single values for each reform and per organization, a value is obtained for organizational history. This approach causes recent reforms to carry more weight than older ones. A significant positive impact for both indicators of organizational history would imply that these series of structural reforms positively affect the influence of principals.

3.3. Control variables

In line with literature on managerial autonomy (e.g. Lonti, 2005; Van de Walle, 2018) we control for socio-demographic differences by adding a number of individual-level control variables: age and gender of the respondent, current position (What is your current hierarchical level?), tenure within the organization, the position (hierarchical level) of the respondent when he/she entered the organization, the current task of the respondent, whether the respondent received any job offers in the past year, the degree to which there are clear rules concerning their job, the degree to which the respondent identifies with his department and finally the degree to which the respondent characterizes his field of responsibility by agreement or disagreement.⁴ Apart from these individual-level controls and based upon the more developed managerial autonomy literature, we also add include control variables on the organizational level. As such, the policy field of the organization is included. In our models, policy domain is operationalized using the Classification of the Functions of Government, or COFOG, see appendix table 5. Moreover, and based upon a similar reasoning, we include the age of the organization (e.g. positive effect on organizational autonomy: Maggetti, 2012/ negative effect: Verhoest et al., 2010). Table 1 shows descriptive statistics with a reference to the precise survey question that was used, as well as a (Pearson) correlation analysis. As discussed previously, all organizations are central state agencies, making it not necessary to control for the formal structure of organizations, an often cited determinant of organizational autonomy (e.g. Maggetti & Verhoest, 2014).

Please include Table 2 here

4. Method & Results

Please include Table 3 & 4 here

⁴ The precise wording of these questions can be consulted online at: <http://www.nsd.uib.no/polsys/StatiskeDokument/SpSkjemaDir06.html>.

Since our observations of the influence of principals are nested within organizations, there is reason to believe that individuals' observations within a particular organization are not truly independent of one another, resulting in inefficient—or even biased—estimates depending on the severity of the between-group differences. Hence, we employ a hierarchical linear model. The results are presented in Table 3 (the influence from political leadership) and 4 (the influence from ministries).

For both tables, we started out by estimating an 'empty' (also called 'unconditional' or 'null') model to determine the extent of variance between organizations (Column (1)). When averaging across respondents and organizations, the indicator for the weight attached to signals from political leadership (Table 3) equals 4.02 and the weight attached to signals from the parent ministry (Table 4) equals 4.2. This corresponds well with the mean of each of these variables, see also Table 2. Moreover, the Likelihood Ratio (LR) test equals 40.75 (Table 3) and 39.93 (Table 4) with 1 degree of freedom and a p-value of .000, which should be halved to obtain a less conservative test.⁵ In this case halving does not affect the conclusion. The null hypothesis should be rejected since there is evidence of cross-organization variation in the degree of the influence of political principals.

The intra-class correlation coefficient (ICC) estimates the proportion of variance at the organization level, relative to the overall variance. Since the dependent variable is measured at the individual level (civil servant level) this level should also have the highest ICC score (Steenbergen and Jones, 2002: p 231). The ICC equals 0.076 for the weight attached to signals from political leadership and 0.087 for signals from ministries, meaning that around 8% of the variance is due to differences across organizations, with the remaining 92 percent attributable

⁵ We are testing a variance component, for which the alternative hypothesis is one-sided. Negative variances, which would exist under a two-sided test do not make sense.

to individual differences. Even though the ICC is not very high, ignoring it would lead to erroneous conclusions, statistically as well as empirically.

In the subsequent step (column (2)), level-1 covariates have been added to the model, for now assuming fixed effects. The intercept is, however, allowed to vary across organizations to accommodate cross-organization differences in the baseline weight attached to signals of political principals. When examining this column for both tables, we notice that gender, task and the position of the respondent significantly affect both the importance of signals from political leadership and the parent ministry. Again, there is evidence of variation in the intercepts. Comparing the fit of the random intercept model to that of a regression model yields a LR score of 26.33 for Table 3 and 24.81 for Table 4 both with a p-value of .000. Hence, we can clearly reject the null hypothesis that the intercept is the same across all organizations as the regression model assumes.

To account for the variation in the intercepts, we add the level 2- covariates in columns 3 and 4. The difference between these columns lies in the coding of organizational history. Column 3 includes the first operationalization of organizational history (total number of structural reforms an organization endured during its lifetime) while column 4 includes the second operationalization of organizational history (taking the timing of each single reform into account). For both models, the same the level-1 covariate, task of the respondent, remains statistically significant. However, position of the respondent loses its significance for the model on the importance of signals from the parent ministry. Of the newly added level-2 covariates, we notice that a higher score on organizational history significantly affects both the weight attached to signals from political leadership as well as to signals from the parent ministry. I.e. the more that organizations are faced with structural reforms, the more likely their employees are to attach greater importance to signals from political (Table 3) and administrative (Table 4) principals. The level 2 R^2 ranges from 82.6% to 72.1% for Table 3 and from 69.4% to 69.6%

for Table 4, suggesting that the level-2 variables account for a significant part of the variation in the intercepts. Hence, reform histories that include 1) more structural reforms and 2) relatively recent structural reforms appear to significantly increase the weight attached to signals from both political and administrative principals.

Please include Table 5 & 6 here

One possible threat to these results that, recently, Norwegian administrations have increasingly pursued post-NPM goals such as re-integration, joint up government and horizontal cooperation, resulting in various reforms to create a less fragmented and more integrated public service (e.g. Christensen et al., 2014; Christensen & Lægheid, 2010 259-264). Given the gradually increasing relevance of post-NPM in Norway, one could claim that our analyses on 2016 data have a bias towards reforms aimed at increasing attention to signals from political and administrative principals, potentially confounding our results or affecting generalizability. Since recent reforms carry more weight than older ones, our finding would consequently reflect the nature of these recent reform trends instead of the rigidizing effect of an intense series of structural reforms.

Thus, in part to replicate our initial results, and in part to verify whether our initial results were robust to the broader reform trends in and around 2016, we reran our analyses on the 2006 wave of the survey and the reform histories occurring until then. This time-period in Norwegian administrative history is characterized by the usage of multiple, co-existing reform paradigms, with some structural reforms focusing on NPM (e.g. structural devolution), some focusing on post-NPM (e.g. stronger integration), some being a mix of both NPM and post-NPM and, finally, some structural reforms being more incidental in nature (Christensen & Lægheid, 2010, 264). Thus, while some structural reforms implemented in or before 2006 may still seek to

increase political control, data from this time-period should be less susceptible to a disproportionate amount of structural reforms having such an aim. Our analyses are presented in Table 5 and 6. The results verify our initial findings. We notice that intensive structural reform histories positively affect the weight public sector employees attach to signals from political and administrative principals. The 2006 coefficient for signals from political leadership is somewhat higher, while the coefficient for signals from the parent ministry remains nearly identical, suggesting that increased focus on post-NPM did not generate the lion's share of the 2016 results' effect size.

5. Discussion

The results presented in the previous section support the argument that repeated structural reform may increase attention devoted to political signals at the individual civil servant level. Both indicators of organizational histories of structural reform provide evidence that more intensive histories of structural reforms (as measured by 1) the amount of structural reforms and 2) their recentness) impact the degree to which individuals in public organizations attach weight to the signals provided by signals from government, their responsible minister or state secretary, political advisors and the organization's superior ministry. Moreover, this result has been replicated on 2006 data, providing additional evidence that our findings are not biased due to temporal aspects of the 2016 Norwegian setting (i.e. a relatively strong focus on integration and a re-assertion of central government in and around the 2016 survey wave).

Threat-rigidity theory suggests that this relationship may operate through the uncertainty and stress generated by (repeated) structural reform, although data limitations imply that this mechanism remains theoretically assumed. The theory suggests that both managers and civil servants within an organization can perceive the implementation of structural reforms as a threat (Staw et al., 1981; Van Hootegem et al., 2019). As an organization restructures multiple times

over several years, its internal makeup remains unstable for a prolonged period. For employees in all levels of such an organization, this instability forms a source of long-term uncertainty on various potential reform outcomes, including the possibility of individual positions becoming redundant or of being reshuffled into new units (Van Hootegem et al., 2019). This is compounded by the stress generated by increased workloads during the transition period.

Threat-rigidity theory predicts that organizations in such a situation may exhibit a constricting effect. Managers, facing the uncertainty and stress of an organization in long-term transition, may attempt to exert additional control over the organization. This tendency to introduce greater control is predicted to result in increased centralization, formalization, groupthink, pressure for uniformity and an overreliance on familiar solutions (Staw et al., 1981). Moreover, peripheral informational cues become less recognized and less accepted within the organization, as stress inhibits cognitive processing, while pressures towards uniformity and centralization increase the sanctioning of deviant positions (Staw et al., 1981; Wynen et al., 2019). Under such circumstances, it is likely that the signals perceived as salient by senior managers are also considered increasingly important within the remainder of the organization. We argue that this forms a likely – albeit due to data-limitations theoretically assumed – cause of our result that higher reform history scores cause effects on perceived importance of political signals on lower levels within the organization.

Threat-rigidity theory is classically an intra-organizational perspective. However, we adapt this theory to include that, at least for the public sector, the risk-adverse tendencies produced by threat-rigidity effects may also manifest in inter-organizational settings. Organizational boundaries within the public sector are relatively ‘porous’ compared to other sectors, with semi-autonomous agencies remaining accountable to – and partially under the control of – political superiors (Christensen & Lægheid, 2007). Thus, the tendency to avoid uncertainty and sanctioning may result in the CEO’s of repeatedly reformed organizations closely monitoring

the signals provided by the political level, while instructing individuals in the remainder of the organization to do likewise. Even political signals bypassing the senior manager level and directly being interpreted by lower ranked civil servants may gain more perceived weight, as civil servants become increasingly fearful of the potential internal sanctioning and controversy that may follow the inadequate follow-up of a signal from the organization's political superior (Bommer & Jalajas, 1999).

On the one hand, such an effect on the perceived weight of political signals may not be necessarily detrimental, as it may stimulate an organization's responsiveness to the preferences of the democratically legitimated political level (Carpenter, 1996). On the other hand, when the purpose of an organization's creation was to let it emphasize signals other than those from political principals (e.g. Majone, 1997), such an increased weight attached to political signals may be undesirable. Some agencies have attained their devolved status to foster an apolitical and impartial execution of tasks (Barron, 2008; Hood & Lodge, 2008, 27, 30-31). This holds in particular for regulatory, enforcement, supervisory, arbitration, advisory and even some service-delivery agencies (Barron, 2008). Should an increased emphasis placed on these signals in turn affect decision-making (e.g. avoiding decisions and policies which run counter to the political and administrative principals' recent signals (Terman, 2014)), the impartial and apolitical nature of the organization's decision-making may (Esty, 2006), in this case likely inadvertently and unintentionally, be threatened.

In this context, it is also worth reemphasizing that the ICC, while comparatively small compared to the variance explained by the individual level, still suggests that organizational-level aspects (including reform histories) may explain a sizeable amount of the variance of attention devoted political signals. Additionally, the effect sizes of the structural reform history indicators seem non-negligible, with the models incorporating coding one – the most directly interpretable coding – suggesting that every extra structural reform introduced results in an

average increase of attention devoted to signals from 1) the government and the competent minister/state secretary and political advisors or 2) parent ministry of respectively 0.07 and 0.08 on a 5-point Likert scale. Given that the mean amount of structural reforms experienced is 2.78, with a standard deviation of over 2.3, the accumulated effect size predicted for many organizations may become quite substantial. Moreover, as the standard deviation of both dependent variables is close to 1, the predicted effect of for instance an organization experiencing three reforms ($0.07*3=0.21$ or $0.08*3=0.24$) can be considered quite substantial.

Although some structural reforms may admittedly be geared towards increasing the degree to which an organization is responsive to its political and ministerial superiors (Christensen et al., 2008), we believe this is unlikely to be the case for all structural reforms that are implemented in repeatedly reformed entities. Many reforms are instead introduced for *sui generis* reasons relating to a specific organization, changes in policy preferences, efficiency concerns, or even to increase the autonomy of an organization (especially if impartiality or credible commitment is valued highly for that organization (see e.g. NCA, 2016)). Thus, when studying the accumulated histories of all structural reforms across multiple organizations, the effect of structural reforms aimed at greater political control should be offset by structural reforms with other aims. We therefore believe that the effect of increasing perceived importance of political signals is likely in large part an unintended byproduct of the organization-psychological processes that manifest following repeated structural reform.

Accordingly, an important contribution of this paper is practical in nature: politicians, policymakers, managers and reformers should anticipate that an organization may not behave as intended over its lifetime due to effects caused by long-term developments such as the amount of structural reforms that the organization has experienced. When such changes in the predisposition of the organization are detected, policymakers or public managers may take additional measures to ensure that civil servants within the organization are not increasingly

caught up in the short-term priorities of political life (Flinders & Buller, 2006; Zito, 2015). This could for instance include re-emphasizing the original mission through information-provision or training, refraining from imposing additional reforms or culture management etc.

The first and perhaps foremost limitation of this study is its lack of data on threat-rigidity effects. On the one hand, the threat-rigidity perspective provides a theoretically sound explanation for our results. Moreover, contributions that do address threat-rigidity effects such as uncertainty and reductions in cognitive processing provide relatively consistent findings, attesting to the theory's validity in the context of organizational reform (e.g. Van Hootegem et al., 2019; Bommer & Jalajas, 1999; Daly et al., 2009). On the other, our current data-limitations mean that the relationship between threat-rigidity and political signals, as well as the argued inter-organizational dimension of threat-rigidity remain theoretical assumptions. Further research is necessary to confirm the theoretical framework developed here. A second important limitation of the current study is its cross-sectional nature. It was not possible to use panel estimators to reduce endogeneity issues. As the combined availability of surveys linkable on the individual-level over time and long-term (structural) reform data is to our knowledge not currently available, this would be a point to address in future data-gathering endeavors.

Another potential limitation lies in the context studied. In this vein, it is particularly notable that Norwegian agencies tend to report relatively high levels of perceived autonomy (Roness et al., 2008; Bach, 2014; Lægreid et al., 2006), a variable likely highly correlated with perceived importance of political signals. However, if the autonomy of public organizations in other states is indeed more qualified than seems to be the case for Norway, we would expect any potential moderating effect of national culture to limit effect sizes for Norwegian studies—implying that the relationship observed here might manifest more strongly in other states. After all, agencies in other states may be comparatively inclined to see imposed structural reforms as attempts at control (Kleizen et al., 2018), or be more attuned to controlling political and ministerial

principals in general. Accordingly, we are cautiously optimistic that our findings are generalizable, even if effect sizes may differ. Another notable contextual feature is that recent Norwegian post-NPM efforts have sought to improve control and coordination of public organizations (Christensen & Læg Reid, 2008). However, the threat of these management trends being a potential confounder should be mitigated by our replication of results for both the 2006 and 2016 Staff Surveys, which allowed us to test whether the relationship between structural reform histories and perceived importance of political signals holds across different temporal contexts with different management trends.

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7. Tables & Figures

Table 1 Distribution of structural reforms

Event (N=107)	Freq. over total reforms	Freq. across organizations
new superior organization (horizontal movement)	19,63%	34,21%
change of legal form	2,80%	7,89%
change of location	5,61%	15,79%
maintenance by secession	7,48%	15,79%
maintenance by reorganization	40,19%	55,26%
new superior organization and level	1,87%	2,63%
maintenance by absorption	14,95%	21,05%
unit moving into, or out of, integrated organizations	7,48%	15,79%

Table 2 Descriptive statistics

Variables	Survey Question	Mean	Sd.		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
Signals from political leadership	18_C	4.07	1.09	(1)	1.0000																
Signals from the ministry	18_E	4.21	0.92	(2)	0.6952	1.0000															
Individual level N=918																					
Age	53I	3.93	1.02	(3)	0.0414	0.0147	1.0000														
Gender	54	1.50	0.50	(4)	0.0654	0.0730	-0.1595	1.0000													
Position	2I	1.36	0.85	(5)	0.1172	0.0935	0.1037	0.0156	1.0000												
Tenure	6L_3	2.55	0.73	(6)	0.0310	0.0716	0.2030	-0.0624	0.0995	1.0000											
Startingjob	5I	1.85	0.86	(7)	0.1120	0.0887	0.1421	-0.0088	0.3804	-0.0007	1.0000										
Rules	7	2.58	1.13	(8)	0.0581	0.0521	0.0117	0.0399	-0.0644	0.0484	0.0419	1.0000									
Task	5	6.05	2.35	(9)	-0.0344	-0.0656	0.0482	-0.0569	0.0476	-0.0208	0.0085	0.0271	1.0000								
Joboffers	52A	1.69	0.46	(10)	-0.0331	0.0232	0.0926	-0.0185	-0.0509	0.0082	-0.1195	-0.0642	0.0038	1.0000							
Identity	5I	1.71	1	(11)	-0.0211	-0.0651	-0.0408	0.0374	-0.1374	0.0029	0.0196	0.2045	-0.0036	0.0309	1.0000						
Conflict	35	2.40	0.87	(12)	-0.0330	-0.0297	-0.1672	0.0571	-0.0261	-0.0436	-0.0590	0.2093	0.0261	-0.0519	0.1387	1.0000					
Organizational level N=38																					
Individuals per organization		Min.	3																		
		Average	24.2																		
		Max.	73																		
Number of events		2.78	2.33	(13)	0.0508	0.0680	0.0173	0.0101	0.0414	0.0065	-0.0775	0.0254	-0.0217	-0.0129	-0.0371	0.0536	1.0000				
Linear depreciation		1.51	1.59	(14)	0.0112	0.0527	0.0120	0.0194	0.0315	-0.0061	-0.0759	0.0005	-0.0316	0.0033	-0.0510	0.0395	0.9329	1.0000			
COFOG		4.92	3.07	(15)	0.1293	0.0998	-0.0600	0.0513	-0.0296	-0.0140	-0.0288	0.0111	0.0272	-0.0174	0.0172	0.0451	0.0761	0.0106	1.0000		
Orgage		50.20	47.62	(16)	-0.1457	-0.1187	0.0746	-0.0114	-0.0108	-0.0196	-0.1675	-0.0405	-0.0337	0.0251	0.0014	0.0015	0.5670	0.6497	-0.3495	1.0000	

² The surveys can be consulted online: <http://www.nsd.uib.no/polsys/StatiskeDokument/SpSkjemaDir06.html>

Table 3 Results multilevel signals from political leadership

Variables	(1)	(2)	(3)	(4)
Constant	4.02*** (0.06)	3.83*** (0.34)	3.66*** (0.35)	3.73*** (0.35)
Individual characteristics				
Age		0.03 (0.04)	0.04 (0.04)	0.04 (0.04)
Gender		0.12* (0.07)	0.13* (0.07)	0.12* (0.07)
Position		$\chi^2(3)=7.74^*$	$\chi^2(3)=7.00^*$	$\chi^2(3)=7.42^*$
Tenure		$\chi^2(2)=0.23$	$\chi^2(2)=0.22$	$\chi^2(2)=0.18$
Startingjob		$\chi^2(4)=4.23$	$\chi^2(4)=3.19$	$\chi^2(4)=3.18$
Rules		0.01 (0.03)	0.01 (0.03)	0.01 (0.03)
Task		$\chi^2(9)=34.41^{***}$	$\chi^2(9)=39.00^{***}$	$\chi^2(9)=39.01^{***}$
Joboffers		-0.04 (0.08)	-0.04 (0.08)	-0.04 (0.08)
Identity		-0.02 (0.04)	-0.02 (0.04)	-0.02 (0.04)
Conflict		-0.06 (0.04)	-0.06 (0.04)	-0.06 (0.04)
Organizational characteristics				
Cofog			$\chi^2(8)=8.07$	$\chi^2(8)=6.14$
Organizational age			0.00 (0.00)	0.00 (0.00)
History (1)			0.08*** (0.02)	
History (2)				0.09*** (0.04)
Observations	918	918	918	918
Number of Organizations	38	38	38	38
LR test (conservative)	$\chi^2(1)=40.75^{***}$	$\chi^2(1)=26.33^{***}$	$\chi^2(1)=1.28$	$\chi^2(1)=2.96^{**}$
Intra-class correlation	0.076			
Level-2 R ²			0.826	0.721

Standard errors in parentheses *** p<0.01. ** p<0.05. * p<0.1

Table 4 Results multilevel signals from the parent ministry

Variables	(1)	(2)	(3)	(4)
Constant	4.20*** (0.06)	3.77*** (0.28)	3.59*** (0.30)	3.66*** (0.30)
Individual characteristics				
Age		0.00 (0.03)	0.01 (0.03)	0.01 (0.03)
Gender		0.12** (0.06)	0.13** (0.06)	0.13** (0.06)
Position		$\chi^2(3)=5.47$	$\chi^2(3)=5.03$	$\chi^2(3)=5.12$
Tenure		$\chi^2(2)=3.46$	$\chi^2(2)=3.43$	$\chi^2(2)=3.5$
Startingjob		$\chi^2(4)=6.46$	$\chi^2(4)=5.51$	$\chi^2(4)=5.44$
Rules		0.03 (0.03)	0.02 (0.03)	0.02 (0.03)
Task		$\chi^2(9)=24.96***$	$\chi^2(9)=27.30***$	$\chi^2(9)=27.74***$
Joboffers		0.06 (0.06)	0.07 (0.06)	0.06 (0.06)
Identity		-0.06** (0.03)	-0.06** (0.03)	-0.06** (0.03)
Conflict		-0.04 (0.04)	-0.04 (0.03)	-0.04 (0.03)
Organizational characteristics				
Cofog			$\chi^2(8)=7.7$	$\chi^2(8)=5.7$
Organizational age			0.00 (0.00)	0.00 (0.00)
History (1)			0.07*** (0.02)	
History (2)				0.10*** (0.03)
Observations	918	918	918	918
Number of Organizations	38	38	38	38
LR test (conservative)	$\chi^2(1)=39.93***$	$\chi^2(1)=24.81***$	$\chi^2(1)=3.44**$	$\chi^2(1)=2.83**$
Intra-class correlation	0.087			
Level-2 R ²			0.694	0.696

Standard errors in parentheses *** p<0.01. ** p<0.05. * p<0.1

Table 5 Signals from political leadership (Robustness test 2006 data)

Variables	(1)	(2)	(3)	(4)
Constant	3.79*** (0.09)	2.85*** (0.43)	2.94*** (0.46)	2.98*** (0.46)
Individual characteristics				
Age		0.06 (0.04)	0.06 (0.04)	0.06 (0.04)
Gender		0.33*** (0.07)	0.33*** (0.07)	0.33*** (0.07)
Position		$\chi^2(3)=8.14^{**}$	$\chi^2(3)=8.14^{**}$	$\chi^2(3)=8.04^{**}$
Tenure		$\chi^2(2)=0.42$	$\chi^2(2)=0.42$	$\chi^2(2)=0.38$
Startingjob		$\chi^2(4)=6.83$	$\chi^2(4)=6.73$	$\chi^2(4)=6.45$
Rules		-0.02 (0.03)	-0.02 (0.03)	-0.02 (0.03)
Task		$\chi^2(9)=11.5$	$\chi^2(9)=11.33$	$\chi^2(9)=12.32$
Joboffers		0.02 (0.07)	0.02 (0.07)	0.02 (0.07)
Identity		-0.05 (0.04)	-0.05 (0.04)	-0.05 (0.04)
Conflict		0.05 (0.04)	0.05 (0.04)	0.05 (0.04)
Organizational characteristics				
Cofog			$\chi^2(9)=13.53$	$\chi^2(9)=13.61$
Organizational age			-0.01*** (0.00)	-0.01*** (0.00)
History (1)			0.12*** (0.04)	
History (2)				0.16*** (0.06)
Observations	1,093	1,093	1,093	1,093
Number of groups	48	48	48	48
LR test (conservative)	$\chi^2(1)=110.22^{***}$	$\chi^2(1)=89.97^{***}$	$\chi^2(1)=29.82^{***}$	$\chi^2(1)=32.28^{***}$
Intra-class correlation	0.16			
Level-2 R ²			0,51	0,5

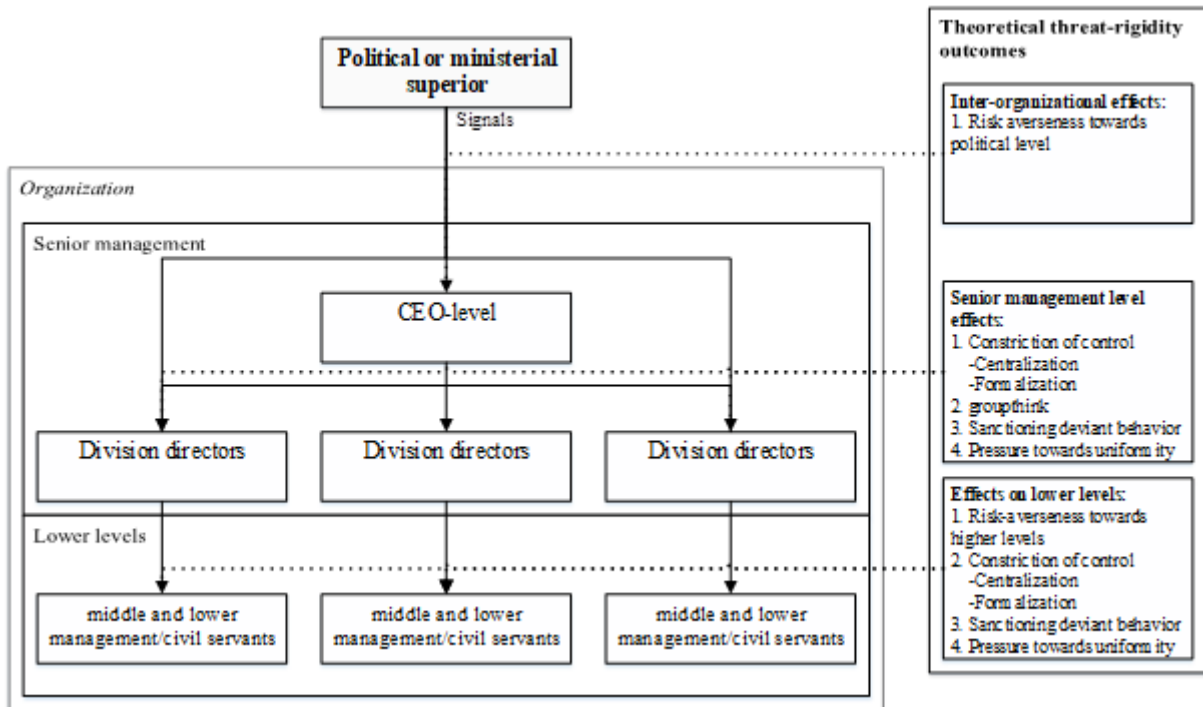
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 6 Signals from the parent ministry (Robustness test 2006 data)

Variables	(1)	(2)	(3)	(4)
Constant	3.99*** (0.07)	3.30*** (0.37)	3.35*** (0.40)	3.37*** (0.40)
Individual characteristics				
Age		0.07** (0.03)	0.06** (0.03)	0.07** (0.03)
Gender		0.34*** (0.06)	0.34*** (0.06)	0.34*** (0.06)
Position		$\chi^2(3)=8.7^{**}$	$\chi^2(3)=8.79^{**}$	$\chi^2(3)=8.8^{**}$
Tenure		$\chi^2(2)=2.98$	$\chi^2(2)=2.24$	$\chi^2(2)=2.3$
Startingjob		$\chi^2(4)=2.77$	$\chi^2(4)=2.74$	$\chi^2(4)=2.49$
Rules		-0.03 (0.03)	-0.03 (0.03)	-0.03 (0.03)
Task		$\chi^2(9)=17.54^{**}$	$\chi^2(9)=17.55^{**}$	$\chi^2(9)=18.11^{**}$
Joboffers		0.11* (0.06)	0.10 (0.06)	0.10 (0.06)
Identity		-0.07** (0.03)	-0.07** (0.03)	-0.07** (0.03)
Conflict		-0.02 (0.04)	-0.02 (0.04)	-0.02 (0.04)
Organizational characteristics				
Cofog			$\chi^2(9)=13.9$	$\chi^2(9)=13.39$
Orgage			-0.00** (0.00)	-0.00** (0.00)
History (1)			0.06* (0.03)	
History (2)				0.08* (0.04)
Observations	1,093	1,093	1,093	1,093
Number of groups	48	48	48	48
LR test (conservative)	$\chi^2(1)=73.14^{***}$	$\chi^2(1)=61.7^{***}$	$\chi^2(1)=20.28^{***}$	$\chi^2(1)=20.06^{***}$
Intra-class correlation	0.12			
Level-2 R ²			0.49	0.51

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Figure 1 Hypothetical organigram with political signal pathways and relevant threat-rigidity outcomes superimposed.



8. Appendix

Table 7 Coding of COFOG

COFOG	Description	Frequency (% of total organizations)
1	General public services	14
2	Defence	6
3	Public order and safety	3
4	Economic affairs	44
6	Housing and community amenities	3
7	Health	9
8	Recreation, culture and religion	6
9	Education	3
10	Social Protection	12

Table 8 Coding scheme control variables

Control variables	Question	Answer categories
Individual-level		
Age	How old are you?	1: 25-34 2: 35-44 3: 45-54 4: 55-64 5: 65 or older
Gender	What is your gender?	1: Male 2: Female
Position	What is your current classification?	1: Senior Consultant Level / Advisor 2: Office manager / advisor 3: Deputy Director / Advisor 4: Departmental Director / Advisor 5: Director or equivalent
Task	What is your primary task?	1: Wage and Personnel Management 2: Organizational development (re) organization 3: Preparation / amendment of laws, transcript 4: Budgeting 5: Other Investigation and Planning 6: Single decisions 7: Supervision, supervision, public follow-up 8: Reporting of results 9: Coordination 10: Information, communication work
Tenure	How many years have you been working for the organization?	1: less or 1 year 2: between 1 and 5 years 3: more than 5 years
Starting job	What was your starting job	1: Senior Consultant Level / Advisor 2: Office manager / advisor 3: Deputy Director / Advisor 4: Departmental Director / Advisor 5: Director or equivalent
Joboffers	Did you in the last year receive job offers?	1: Yes 2: No
Identity	To what degree do you identify yourself with your department?	1(strongly disagree)-5 (strongly agree)
Conflict	To what degree do you characterize your field of responsibility by agreement or disagreement?	1(strongly disagree)-5 (strongly agree)
Organizational-level		
Policy domain	see table 7	1-10
Organizational age	2016- birth date of the organization	Continuous