INSTITUTIONAL ISOMORPHISM, NEGATIVITY BIAS AND PERFORMANCE INFORMATION USE BY POLITICIANS: A SURVEY EXPERIMENT.

ABSTRACT

New Public Management popularized performance measurement (PM) in public organizations. Underlying PM’s popularity, is the assumption that it injects performance information (PI) into decision-making thus rationalizing the ensuing decisions. Despite PM’s popularity, it is criticized. In part, this criticism results from the limited knowledge on why PI is used by politicians. We conduct a survey experiment based on real PI with 1,210 politicians. We hypothesize that PI has a positive impact on performance information use (PIU) when PI is benchmarked with a coercive, mimetic or normative institutional pressure. Moreover, we expect this positive impact to be stronger when PI is negative. We find that coercive and normative pressures indeed have a positive impact on intended PIU but only normative pressures have a positive impact on actual PIU. Moreover, mimetic pressures have a positive impact on actual PIU but only when PI is negative. Implications for practice and theory are discussed.

KEYWORDS

Performance measurement, accounting information, institutional isomorphism, negativity bias, performance information use
INTRODUCTION

The advent of New Public Management (NPM) – a focus on accountability, effectiveness and efficiency – has ignited the popularity of performance measurement in public organizations (Hood 1991, Osborne 2006). Performance measurement has been operationalized as an approach to strategy implementation which includes (a) using performance information to track the realization of strategic goals over time, (b) setting targets for this information and evaluating performance against those targets and (c) comparing performance information across departments and with other organizations (Poister, Pasha, and Edwards 2013, George and Desmidt 2016). Underlying its popularity, is the assumption that performance measurement “works”, using performance information is assumed to contribute to public service performance because it increases accountability and provides information to rationalize decision-making (OECD 1997, 1994, Hatry 2007). Following this assumption, policymakers worldwide have seen the benefits of performance measurement and approved legislative initiatives to coerce performance measurement to governments at all levels – examples include the Government Performance and Results Act in the US, Best Value in the UK and the Policy and Management Cycle in Flanders (Kravchuk and Schack 1996, Boyne et al. 2002, George et al. 2016).

At first blush, the argument favoring performance measurement seems intuitively agreeable. After the implosion of the unsustainable, oversized, bureaucratic and procedural government of the Weberian Bureaucracy, there was a need for a parsimonious approach to resource allocation as well as a focus on output and results in public organizations – the policies of Reagan and Thatcher during the eighties are often cited as examples of policymakers addressing this need (Hughes 2012, Hood 1991). Times have however changed. Some of the assumptions underlying NPM have been challenged by the New Public Governance-movement due to NPM’s focus on control and blame – as opposed to trust and cooperation (Koppenjan 2012, Osborne 2006). Similarly, performance measurement has received strong criticism and was found to result in blame games by public-sector practitioners (Hood 2011, Nielsen and Baekgaard 2015, Radin 2006). A paradox thus emerges where, on the one hand, performance measurement is widely used by public organizations in the belief that it enhances
accountability, decision-making and, ultimately, performance, while, on the other hand, criticism on its actual effectiveness in the public sector has never been more potent.

Underlying this paradox is a lack of understanding on why performance information is actually being used by public-sector practitioners (Moynihan and Pandey 2010). Several studies have linked performance measurement directly to public service performance (e.g. Gerrish 2016, Poister, Pasha, and Edwards 2013) – thus implicitly assuming that when performance measurement is there, performance information is being used. However, this is clearly not the case as psychological, political and technical factors have influenced performance information use even when performance measurement systems are in place (e.g. Taylor 2011, Nomm and Randma-Liiv 2012). Moreover, performance measurement has predominantly been operationalized at the organizational, meso-level using survey data from administrative staff (e.g. George and Desmidt 2016, Pollanen et al. 2016), which inhibits our ability to elucidate why performance information is used by individuals, at the micro-level, and particularly by politicians. This is no trivial matter as policymaking in many public organizations is part of the political arena where individual politicians use information – often provided by administrative staff – as well as their own political beliefs and agreements to formulate new policies and decisions related to those policies (Nielsen and Baekgaard 2015, George et al. 2016). One could thus argue that performance measurement is particularly effective in public organizations when politicians actually use performance information to inform their decision-making processes.

The paper at hand seeks to expand our understanding of why politicians use performance information in public organizations. We use institutional isomorphism (Powell and DiMaggio 1991) to hypothesize when performance information might be used, namely when it is benchmarked with a coercive, normative or mimetic institutional pressure. Additionally, we use negativity bias (Rozin and Royzman 2001) to hypothesize that the impact of institutional pressures on performance information use is stronger when performance information is negative. We conduct a randomized survey experiment with 1,210 local politicians from Flemish municipalities (Flanders is the northern, Dutch-speaking part of Belgium) to test these hypotheses. This setting is particularly relevant due to recent
NPM-like reforms that have enforced elements of performance measurement upon Flemish municipalities (George, Desmidt, and De Moyer 2016). In this experiment, real performance information of a municipality is used, namely an indicator that measures the financial performance of Flemish municipalities (i.e. the Self-Financing Margin). Our dependent variable includes both the intended use of this indicator as well a semi-behavioral measure of actual use.

We offer several contributions to public administration theory and practice. First, we address the call for more insights into why practitioners actually use performance information in public organizations (Moynihan and Pandey 2010). Second, by focusing on local politicians we expand the current focus on managers and managerial rationality to politicians and political rationality in explaining performance information use (Nielsen and Baekgaard 2015). Third, by employing a randomized survey experiment based on real information we build on state-of-the-art methods for identifying causal inference that do not suffer from endogeneity issues, which is a weakness of current public administration research (George and Pandey 2017). Fourth, we extrapolate insights from institutional isomorphism (Powell and DiMaggio 1991) – a well-established theory within social science – towards performance measurement research by identifying whether coercive, normative and mimetic pressures help explain why politicians use performance information. Fifth, we incorporate negativity bias (Rozin and Royzman 2001) as a moderator based on psychological theory thus using theories and methods from psychology to elucidate public administration phenomena (i.e. Behavioral Public Administration) (Grimmelikhuijsen et al. 2017). Finally, our insights can help practitioners make performance measurement more effective by adapting the ways in which performance information is actually presented to politicians – i.e. by benchmarking it with an institutional pressure.

In what follows, we elaborate on our theoretical frameworks and define our hypotheses. Next, we discuss the design of our experiment – including balance and manipulation checks – as well as our empirical setting. We move on to our results which indicate that both institutional isomorphism and negativity bias influence politicians’ use of performance information. In conclusion, we present the implications of these findings for practice and theory.
THEORY AND HYPOTHESES

This paper draws on two theoretical frameworks to identify theory-driven hypotheses on the determinants of performance information use by politicians. First, based on institutional isomorphism (Powell and DiMaggio 1991) we argue that benchmarking performance information with coercive, mimetic or normative institutional pressures has a direct positive effect on performance information use. Second, based on negativity bias (Rozin and Royzman 2001) we argue that this direct positive effect is stronger when performance information illustrates negative performance. This results in following conceptual model (see Figure 1) which will be further discussed in the coming sections:

Figure 1: Conceptual model predicting performance information use

Institutional isomorphism and performance information use

Institutional isomorphism is one of the theoretical mechanisms underlying New Institutional Theory (Powell and DiMaggio 1991, Scott 2008) and is particularly useful to investigate public-sector adoption of administrative innovations (Lowndes and Wilson 2003, George and Desmidt 2014, Ashworth, Boyne, and Delbridge 2009). One of the core assumptions of New Institutional Theory is that specific institutions formulate rules that need to be followed by individuals if they seek to obtain legitimacy
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(Lowndes and Wilson 2003, Powell and DiMaggio 1991). Public-sector practitioners thus operate in “an environment dominated by roles, requirements, understandings, and assumptions, beliefs and scripts about what constitutes appropriate or acceptable organizational forms and behavior” (Decramer et al. 2012, p. S90). As a result of this environment, institutional isomorphism emerges – which “is a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions” (Powell and DiMaggio 1991, p. 66).

Institutional isomorphism occurs as a result of three specific institutional pressures: coercive (i.e. indicating conformity with formal and informal rules and regulations), mimetic (i.e. common responses to uncertainty based on modelling after other organizations) and normative (i.e. through formal education and advice from professional organizations) pressures (Powell and DiMaggio 1991, Decramer et al. 2012, George and Desmidt 2014). Hence, applied to the context of performance information use, we can expect actors within public organizations (i.e. politicians) to use performance information when it is benchmarked with a coercive, mimetic or normative pressure, even if technically inefficient, in order to gain legitimacy, and the resources necessary to ensure their “survival” (Meyer and Rowan 1977, Powell and DiMaggio 1991, Zucker 1987).

Coercive pressures under the form of formal regulations have clearly emerged in the context of performance measurement in public organizations. Legislative initiatives such as the Government Performance and Results Act in the US and Best Value in the UK coerced public organizations to formulate, implement and report on performance information to some form of central authority as well as achieve specific performance standards (Boyne et al. 2002, Barkdoll and Bosin 1997). In the empirical setting of this paper (i.e. Flemish municipalities), several rules and regulations have also been formulated by the Flemish Government and a specific performance standard was set concerning the financial performance (i.e. Self-Financing Margin) of Flemish municipalities (Leroy 2011). Hence, extrapolating the insights from institutional isomorphism, we expect that politicians who receive performance information that is benchmarked with this coercive performance standard set by the
Flemish Government are more likely to use this performance information to ensure their legitimacy as politicians. This results in following hypothesis:

**H1:** PI benchmarked with a coercive pressure is positively related to PIU by politicians.

Mimetic pressures indicate that “organizations may model themselves on other organizations” when confronted with uncertainty (Powell and DiMaggio 1991, p. 69). Applied to performance measurement in public organizations, we can expect public-sector practitioners to actively look at what their neighbors are doing and use this information in their decision-making processes. Indeed, public-sector evidence has shown that public organizations are influenced by the behavior of sister agencies in choosing to adopt specific performance management processes (e.g. Berry 1994, Berry and Wechsler 1995, Ashworth, Boyne, and Delbridge 2009). In Flemish municipalities, mimetic behavior can also be expected as the recent NPM-reforms have created uncertainty among politicians and administrative staff on how to apply the coerced performance measurement system and achieve performance standards (George and Desmidt 2014). As such, taking into account the mechanisms underlying institutional isomorphism, we expect that politicians who are confronted with performance information benchmarked with the average score of their neighboring municipalities are more likely to use this information in their quest to minimize uncertainty in the current reform setting. This results in our second hypothesis:

**H2:** PI benchmarked with a mimetic pressure is positively related to PIU by politicians.

Normative pressures emerge “primarily from professionalization”, which is defined as “the collective struggle of members of an occupation to define the conditions and methods of their work [...] and to establish a cognitive base and legitimation for their occupational autonomy” (Powell and DiMaggio 1991, p. 70). Professional organizations are a specific example of a normative pressure that is especially relevant to public organizations. Indeed, the public sector is typically filled with professional organizations that group a set of public organizations (e.g. National League of Cities in the US) or a set of public-sector professions (e.g. Association of City Managers in the Netherlands) – and, based on institutional isomorphism, one can expect these organizations to impact the activities of their
members (e.g. Blair and Janousek 2014, Stillman 1977). Again applied to our empirical setting, Flemish municipalities are grouped by the Association of Flemish Cities and Municipalities – which offers advice and support to all its members. In line with institutional isomorphism, we thus expect that politicians who are confronted with performance information benchmarked with a norm advised by the Association of Flemish Cities and Municipalities are more likely to use this performance information as an indication of their professionalization as politicians. This leads to our third hypothesis:

**H3: PI benchmarked with a normative pressure is positively related to PIU by politicians.**

**The moderating role of negativity bias**

Negativity bias (Rozin and Royzman 2001) is a popular theoretical concept from psychology which indicates that human beings in general tend to react more strongly to negative events, experiences or information than to positive or neutral ones – even when all other factors are kept constant (Baumeister, Finkenauer, and Vohs 2001). Despite being labelled as a theoretical concept, a variety of evidence has emerged that validates the central proposition of negativity bias. For instance, it has been found that voters are more strongly impacted by negative information on candidates in their voting patterns than by positive information (Klein 1991). Similarly, people tend to spend more time looking at negative photographs than at positive ones (Fiske 1980) and when a decision needs to be made that results in a gain or a loss – the costs associated with the loss receive more attention than the possible gains (Wells, Hobfoll, and Lavin 1999).

Similar arguments have been made within public administration and particularly when it concerns performance information in relation to politicians. For instance, low performance of public organizations is argued to spark strong attention from the public whereas high performance often stays under the radar (Hood 2011, Lau 1982, James and Moseley 2014) – which implies that politicians tend to focus more on low performance because this could damage their re-election (Soroka 2006). Nielsen and Baekgaard (2015) frame this negativity bias in relation to performance information by indicating that “credit claiming [is] of much less importance than blame avoidance”. Similarly, Nielsen and Moynihan (2017) found that politicians are more likely to attribute responsibility for performance
data to administrators but only when low performance information is given. Hence, both the theoretical arguments and evidence across the social sciences seemingly indicate that negativity bias matters when assessing the impact of performance information.

In the case of performance information use by politicians, a particular cognitive aspect of negativity bias is especially applicable. Negative differentiation (Rozin and Royzman 2001) implies that negative information sparks more information-processing by individuals than positive information. We tend to invest more time in thinking about the negatives than the positives (Abele 1985). Applying this logic to our case, we argue that when we assign performance information benchmarked to an institutional pressure, this performance information will have a particularly strong effect on performance information use (i.e. an information-processing activity) when a municipality scores lower than the given benchmark. This leads us to our final hypothesis:

**H4:** The positive relation between PI benchmarked with an institutional pressure and PIU by politicians is stronger when PI signals bad performance.

**METHODS**

**Units of analysis**

Our survey experiment was sent to actual city councilors in all 308 Flemish municipalities (i.e. Flanders is the northern, Dutch-speaking part of Belgium). The context of Flemish local government is particularly relevant from a New Institutional and methodological viewpoint. Recent legislation has imposed a performance management cycle as well as a performance standard (i.e. Self-Financing Margin) upon Flemish local government with the aim of improving their financial performance (Leroy 2011, George, Desmidt, and De Moyer 2016). This legislation ensures that (a) we can use actual performance information related to financial performance (i.e. Self-Financing Margin) and (b) our defined institutional benchmarks are real as, indeed, performance standards have been set by the Flemish Government, an uncertainty on how to address the reforms is present thus stimulating mimetic behavior and professional organizations are offering their advice on how to answer uncertainties (Leroy 2011, George and Desmidt 2014).
Flemish municipalities also have a similar institutional and economic context, which allows us to exclude several otherwise confounding variables (Goeminne and Smolders 2014). Conclusively, by surveying actual local politicians in a homogeneous institutional and economic setting, using real performance information and linking this information to actual institutional pressures, we greatly enhance the realism underlying our survey experiment – which is a common criticism of these types of experiments (Aguinis and Bradley 2014, Margetts 2011).

**Randomization procedure and estimation method**

In order to trace the causal effects of our experimental treatment in our survey experiment, respondents were randomly and automatically assigned to either a control group or one of three treatment groups by the software package we used (i.e. Qualtrics). However, within each of the four experimental groups respondents received different information depending on the financial performance (i.e. Self-Financing Margin) of their municipality and the average financial performance of their neighboring municipalities. Thus, we randomly assign respondents to different institutional pressures, but do not manipulate the content of the information (i.e. financial performance). The survey design is presented in Figure 2.

**Figure 2: Survey design**

```
Introductory question: Previous knowledge of financial performance

Control

T1: Coercive pressure
Different information on own self-financing margin provided.
Different information on own self-financing margin provided and benchmarked with standard set by Flemish Government.

T2: Mimetic pressure
Different information on own self-financing margin provided and benchmarked with the average of neighboring municipalities.

T3: Normative pressure
Different information on own self-financing margin provided and benchmarked with the advice of the Association of Flemish Cities and Municipalities.
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Finally, all respondents across the groups were asked the same questions about performance information use (i.e. our dependent variable) as well as some manipulation checks right after the experimental treatments.

Our approach resembles that of previous studies (e.g. Nielsen and Baekgaard 2015, Nielsen and Moynihan 2017) in which the actual content of information was not manipulated either, due to ethical concerns about the detrimental effects of deceiving political decision makers. This is not a challenge in relation to testing our first set of hypotheses about the impact of coercive, mimetic and normative pressures on performance information use (H1-H3), since randomization ensures that average differences between the control and the treatment groups can be identified by simply comparing performance information use across experimental groups (i.e. causal inference). However, our approach comes at a cost in relation to the analyses of negativity bias (H4). Since the reported financial performance (i.e. the actual score as well as whether this score is below or above a specific benchmark) is not manipulated, our data here essentially are observational and cross-sectional and thus do not allow us to test for causal inference – which is the downside of using real performance information. Hence, in the analysis of negativity bias we need to add organizational-level controls linked to the real information presented in our treatments: The financial performance (i.e. Self-Financing Margin) of Flemish municipalities, whether they score above (1) or below (0) the standard set by the Flemish Government and whether they score above (1) or below (0) the average of their neighboring municipalities.¹

Data collection

As mentioned earlier, a survey experiment was sent to the city councilors of all 308 Flemish municipalities. When designing the survey experiment, we took into account the recent recommendations of Baekgaard et al. (2015). Specifically, our survey needed to be up to par with the general survey requirements set for public administration scholarship (Lee, Benoit-Bryan, and Johnson

¹ The norm advised by the Association of Flemish Cities and Municipalities is actually the same as the performance standard set by the Flemish Government, implying that the values are the same and are already controlled for by including the performance standard score.
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2012, Podsakoff, MacKenzie, and Podsakoff 2012), which include: (a) pretesting the survey, (b) identifying expert informants, (c) offering an incentive (i.e. policy report) to ensure committed respondents, (d) adding labels to response options and highlighting different items, (e) putting the experimental treatment and the dependent variables on different pages of the survey to create psychological separation, (f) guaranteeing anonymity, (g) surveying the entire population to avoid issues with sample frames and (h) including a general statement in our invitation letter to minimize response bias. The survey was sent to the entire population of 7,290 city councilors beginning of February 2017. Three reminders were sent and, after four weeks, we received 1,210 responses (i.e. a response rate of 17%).

**Independent variables**

Our independent variables aim to measure a benchmark with a coercive, mimetic or normative institutional pressure. First, we need to select a relevant performance indicator to benchmark. We focus on the Self-Financing Margin of each municipality. The Self-Financing Margin evaluates the long term financial stability of a municipality and is calculated by subtracting the exploitation expenditures from the exploitation income, and thereafter subtracting the loan charges which consist of capital repayments and interest from outstanding loans. A positive Self-Financing Margin indicates that the municipality is, in the long run, able to generate sufficient resources from the normal exploitation to cover the charges of taking up a loan. It signals that a municipality is able to make investments without having to take on another loan or invoke additional loan charges. Following the Local Government Decree, Flemish local governments are obliged by the Flemish Government to make sure that their Self-Financing Margin at least equals zero in the final year of their ongoing policy cycle (Leroy 2011). The data of the Self-Financing Margin are gathered from the annual account of each municipality, which can be publicly consulted via the website of the Flemish government’s Agency for Home Affairs (http://lokaalbestuur.vlaanderen.be/bbc/data-bbc).

Next, we identify whether the Self-Financing Margin of each municipality is (a) below or above the standard of the Flemish Government (i.e. at least 0), (b) above or below the average of the
neighboring municipalities (i.e. we calculated this average for each municipality) and (c) above or below the norm advised by the Association of Flemish Cities and Municipalities (i.e. which is also at least 0). The actual Self-Financing Margin is presented in the vignettes. For the first treatment group, the coercive benchmark was added, for the second treatment group the mimetic benchmark was added and for the third treatment group the normative benchmark was added. This resulted in following vignettes:

**Table 1: Experimental vignettes**

<table>
<thead>
<tr>
<th>Control group</th>
<th>Treatment group 1</th>
<th>Treatment group 2</th>
<th>Treatment group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The financial situation of Flemish municipalities is high on the agenda of the Flemish government. For instance, a lot of attention is being paid to the self-financing margin of municipalities. Based on an analysis of recent accounting information, the self-financing margin in [Insert municipality] is [insert self-financing margin].</td>
<td>The financial situation of Flemish municipalities is high on the agenda of the Flemish government. For instance, a lot of attention is being paid to the self-financing margin of municipalities. Based on an analysis of recent accounting information, the self-financing margin in [Insert municipality] is [insert self-financing margin]. This is [worse/better] than the average score of the neighboring municipalities, which is a self-financing margin of at least € 0.</td>
<td>The financial situation of Flemish municipalities is high on the agenda of the Flemish government. For instance, a lot of attention is being paid to the self-financing margin of municipalities. Based on an analysis of recent accounting information, the self-financing margin in [Insert municipality] is [insert self-financing margin]. This is [worse/better] than the average score of the neighboring municipalities, which is a self-financing margin of at least € 0.</td>
<td>The financial situation of Flemish municipalities is high on the agenda of the Flemish government. For instance, a lot of attention is being paid to the self-financing margin of municipalities. Based on an analysis of recent accounting information, the self-financing margin in [Insert municipality] is [insert self-financing margin]. This is [worse/better] than the advised margin of the Association of Flemish Cities and Municipalities, which is a self-financing margin of at least € 0.</td>
</tr>
</tbody>
</table>

**Dependent variable**

Our dependent variable seeks to grasp the extent to which politicians intend to use our specific performance indicator (i.e. the Self-Financing Margin) to inform their decision-making processes. Importantly, we argue that this usage can differ based on the actual assessment that needs to be made by a politician. Financial indicators might be more fit for assessing the municipal finances whereas indicators concerning citizen satisfaction might be more fit for assessing the quality of municipal service delivery. We incorporate this nuance by – after our vignettes – including three different statements on performance information use: (1) I will use the Self-Financing Margin when analyzing
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the financial situation of my municipality, (2) I will use the Self-Financing Margin when analyzing the overall performance of my municipality and (3) I will use the Self-Financing Margin when analyzing the quality of service delivery in my municipality. All variables were assessed on a scale from 0 to 10. Additionally, we include a semi-behavioral construct to measure actual use of performance information. Namely, we asked our respondents to fill out their e-mail if they want to learn more about the Self-Financing Margin of their municipality (which is a dichotomous variable, 0 = no email and 1 = email given) – by indeed filling this out, we argue that politicians illustrate behavior geared towards using this specific performance indicator.

Table 2 indicates the descriptives of our study. As is apparent, the random assignment of respondents resulted in treatment and control groups of almost equal size. On average, we see that respondents tend to use the Self-Financing Margin more for assessing their municipal finances than for assessing overall performance and quality of service delivery – which is to be expected because the Self-Financing Margin is an indicator of financial performance.

Table 2: Descriptives

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coercive treatment</td>
<td>0.25</td>
<td>0.44</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Mimetic treatment</td>
<td>0.25</td>
<td>0.43</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Normative treatment</td>
<td>0.25</td>
<td>0.43</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>PIU – finance</td>
<td>7.20</td>
<td>2.37</td>
<td>0.00</td>
<td>10.00</td>
</tr>
<tr>
<td>PIU – performance</td>
<td>6.65</td>
<td>2.31</td>
<td>0.00</td>
<td>10.00</td>
</tr>
<tr>
<td>PIU – quality</td>
<td>5.74</td>
<td>2.64</td>
<td>0.00</td>
<td>10.00</td>
</tr>
<tr>
<td>PIU - mail</td>
<td>0.32</td>
<td>0.47</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td>1210</td>
</tr>
</tbody>
</table>

ANALYSIS

Balance and manipulation checks

Before embarking upon our actual analysis, we need to make sure that our control and treatment groups are balanced and we need to execute manipulation checks to identify whether our treatment
is actually effective (Baekgaard et al. 2015). First, as a balance check, we use an independent t-test to identify whether the differences between our control and treatment groups concerning gender, age, years of education, party membership and coalition membership are significant. These are not significant, implying that our groups are well-balanced and we do not need to control for these individual-level variables (Nielsen and Baekgaard 2015). Second, as a manipulation check we include three questions after our vignettes aimed at identifying whether the treatment got through to the respondents: (1) My municipality’s Self-Financing Margin is better than the standard set by the Flemish Government, (2) my municipality’s Self-Financing Margin is better than that of its neighboring municipalities and (3) my municipality’s Self-Financing Margin is better than the advised norm of the Association of Flemish Cities and Municipalities. We expect that the respondents receiving the treatment react differently to these questions than the control group. Table 3, 4 and 5 confirm our expectation in the sense that those receiving positive information are more likely to respond positively (significant positive coefficient) and vice versa (significant negative coefficient). We can now move on to our actual analyses of H1 – H4.

**Table 3: Manipulation check on coercive pressure treatment**

<table>
<thead>
<tr>
<th>Manipulation check</th>
<th>B</th>
<th>s.e.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.438***</td>
<td>0.135</td>
</tr>
<tr>
<td>Coercive treatment positive</td>
<td>1.206***</td>
<td>0.171</td>
</tr>
<tr>
<td>Coercive treatment negative</td>
<td>-1.326**</td>
<td>0.487</td>
</tr>
<tr>
<td>Mimetic treatment</td>
<td>-0.711***</td>
<td>0.201</td>
</tr>
<tr>
<td>Normative treatment</td>
<td>0.723***</td>
<td>0.184</td>
</tr>
<tr>
<td>Chi²</td>
<td>664.559***</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1210</td>
<td></td>
</tr>
</tbody>
</table>

¹ Hierarchical Linear Model with a continuous outcome variable.  
*Note: * p < .10, * * p < .05, * * * p < .01, * * * * p < .001
Table 4: Manipulation check on mimetic pressure treatment

<table>
<thead>
<tr>
<th>Manipulation check¹</th>
<th>B</th>
<th>s.e.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.192***</td>
<td>0.130</td>
</tr>
<tr>
<td>Coercive treatment</td>
<td>0.536***</td>
<td>0.162</td>
</tr>
<tr>
<td>Mimetic treatment positive</td>
<td>1.161***</td>
<td>0.211</td>
</tr>
<tr>
<td>Mimetic treatment negative</td>
<td>-2.105***</td>
<td>0.200</td>
</tr>
<tr>
<td>Normative treatment</td>
<td>0.364*</td>
<td>0.176</td>
</tr>
<tr>
<td>Chi²</td>
<td>784.414***</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1210</td>
<td></td>
</tr>
</tbody>
</table>

¹Hierarchical Linear Model with a continuous outcome variable.

Note: * p < .10, ** p < .05, *** p < .01, **** p < .001

Table 5: Manipulation check on normative pressure treatment

<table>
<thead>
<tr>
<th>Manipulation check¹</th>
<th>B</th>
<th>s.e.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>6.127***</td>
<td>0.130</td>
</tr>
<tr>
<td>Coercive treatment</td>
<td>0.749***</td>
<td>0.165</td>
</tr>
<tr>
<td>Mimetic treatment</td>
<td>-0.575**</td>
<td>0.192</td>
</tr>
<tr>
<td>Normative positive treatment</td>
<td>1.250***</td>
<td>0.168</td>
</tr>
<tr>
<td>Normative negative treatment</td>
<td>-1.837***</td>
<td>0.347</td>
</tr>
<tr>
<td>Chi²</td>
<td>729.210***</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>1210</td>
<td></td>
</tr>
</tbody>
</table>

¹Hierarchical Linear Model with a continuous outcome variable.

Note: * p < .10, ** p < .05, *** p < .01, **** p < .001

Coercive, mimetic and normative pressures and performance information use

All of the analyses are conducted by using Hierarchical Linear Modelling to control for the nested as well as multilevel nature of our data (i.e. politicians are nested in municipalities and in our analysis of H4 we add organizational-level controls to our individual-level experiment) (Hox 2010). In Table 6, we present the results of our testing of H1 to H3. As is apparent from Table 6, we can partially accept H1. Respondents who receive the coercive pressure treatment are more likely to indicate performance information use for analyzing municipal finances, overall municipal performance and the quality of municipal service delivery. However, they are not more likely to actually give their e-mail to receive more information on our performance indicator. Interestingly, the mimetic pressure treatment does not seem to matter much for any of our performance information use variables thus resulting in a rejection of H2. In contrast, we can partially accept H3 as the normative pressure treatment indeed has a significant positive effect on performance information use for analyzing municipal finances and
overall municipal performance. Moreover, the normative pressure treatment even stimulates respondents to give their e-mail in order to receive more information on the performance indicator.

Table 6: Effect of coercive, mimetic and normative pressure treatments on PIU

<table>
<thead>
<tr>
<th></th>
<th>PIU – finance(^1)</th>
<th>PIU – performance(^1)</th>
<th>PIU – quality(^1)</th>
<th>PIU – mail(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>s.e.</td>
<td>B</td>
<td>s.e.</td>
<td>B</td>
</tr>
<tr>
<td>Constant</td>
<td>6.922***</td>
<td>0.147</td>
<td>6.440***</td>
<td>0.134</td>
</tr>
<tr>
<td>Coercive</td>
<td>0.561**</td>
<td>0.205</td>
<td>0.394*</td>
<td>0.191</td>
</tr>
<tr>
<td>Mimetic</td>
<td>0.221</td>
<td>0.190</td>
<td>0.074</td>
<td>0.184</td>
</tr>
<tr>
<td>Normative</td>
<td>0.325(^1)</td>
<td>0.184</td>
<td>0.361*</td>
<td>0.182</td>
</tr>
<tr>
<td>Chi(^2)</td>
<td>295.374</td>
<td>256.833</td>
<td>326.764*</td>
<td>296.323</td>
</tr>
<tr>
<td>N</td>
<td>1210</td>
<td>1210</td>
<td>1210</td>
<td>1210</td>
</tr>
</tbody>
</table>

\(^1\) Hierarchical Linear Model with a continuous outcome variable.
\(^2\) Hierarchical Linear Model with a dichotomous outcome variable (Bernoulli).

Note: * p < .10, * p < .05, ** p < .01, *** p < .001

The moderating role of negativity bias

We split our treatment groups into two subgroups: those receiving positive versus negative performance information – thus effectively resulting in 6 treatment subgroups – and we re-run our models. Moreover, we add the discussed organizational-level controls. In line with H4, we expect that the treatment groups receiving negative performance information react more strongly than those receiving positive performance information (i.e. a bigger effect size). Again, we can partially accept this hypothesis. Negativity bias seemingly influences the strength of the coercive pressure treatment on performance information use for analyzing municipal finances and of the normative pressure treatment on the semi-behavioral construct (i.e. giving e-mail). Importantly, whereas our previous analysis showed that mimetic pressures do not seem to have a significant effect, our subgroup analysis indicates that mimetic pressures can positively influence our semi-behavioral construct, but only when negative performance information is provided. Conclusively, although negativity bias does not seem to have a consistent effect throughout our analyses, it is potent enough to influence some of our direct effects.
Table 7: Effect of positive versus negative coercive pressure treatments on PIU

<table>
<thead>
<tr>
<th></th>
<th>PIU – finance1</th>
<th>PIU – performance1</th>
<th>PIU – quality1</th>
<th>PIU – mail2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
<td>B</td>
<td>s.e.</td>
</tr>
<tr>
<td>Constant</td>
<td>6.922***</td>
<td>0.147</td>
<td>6.440***</td>
<td>0.134</td>
</tr>
<tr>
<td>Coercive positive treatment</td>
<td>0.514*</td>
<td>0.215</td>
<td>0.400*</td>
<td>0.197</td>
</tr>
<tr>
<td>Coercive negative treatment</td>
<td>0.882*</td>
<td>0.428</td>
<td>0.360</td>
<td>0.414</td>
</tr>
<tr>
<td>Mimetic positive treatment</td>
<td>0.265</td>
<td>0.253</td>
<td>0.160</td>
<td>0.253</td>
</tr>
<tr>
<td>Mimetic negative treatment</td>
<td>0.190</td>
<td>0.218</td>
<td>0.013</td>
<td>0.206</td>
</tr>
<tr>
<td>Normative positive treatment</td>
<td>0.341*</td>
<td>0.186</td>
<td>0.336*</td>
<td>0.186</td>
</tr>
<tr>
<td>Normative negative treatment</td>
<td>0.180</td>
<td>0.484</td>
<td>0.594</td>
<td>0.434</td>
</tr>
<tr>
<td>Chi²</td>
<td>295.867</td>
<td>256.876</td>
<td>326.640*</td>
<td>295.736</td>
</tr>
<tr>
<td>N</td>
<td>1210</td>
<td>1210</td>
<td>1210</td>
<td>1210</td>
</tr>
</tbody>
</table>

1 Hierarchical Linear Model with a continuous outcome variable.
2 Hierarchical Linear Model with a dichotomous outcome variable (Bernoulli).
3 The model includes three organizational-level controls: Self-Financing Margin of the municipality and whether the municipality scores below (0) or above (1) the coercive benchmark and the mimetic benchmark. These are not displayed for presentational purposes.

Note: * p < .10, * p < .05, ** p < .01, *** p < .001

DISCUSSION

In this paper, we sought to identify determinants of performance information use by politicians. We used New Institutional Theory – and specifically institutional isomorphism (Powell and DiMaggio 1991) – as well as negativity bias (Rozin and Royzman 2001) to define theory-based hypotheses. A randomized survey experiment based on real information with 1.210 Flemish local politicians was conducted, which led to the conclusion that both institutional pressures as well as negativity bias have a part to play in determining politicians’ performance information use. Coercive and normative pressures had a positive impact on several dimensions of performance information use whereas mimetic pressures had a positive impact on one dimension but only when performance information was negative. These findings have several implications for public administration theory and practice.
Our paper indicates that New Institutional Theory can be a potent theoretical framework to predict politicians’ performance information use. New Institutional Theory has often been used as a framework to devise hypotheses on the behavior of organizations (Powell and DiMaggio 1991, Scott 2008). Nonetheless, we illustrate that New Institutional Theory can be used to define hypotheses on micro-level behavior by individuals within public organizations. We thus extend what has often been assumed a macro and meso level theory to the micro level. This finding can help invigorate further experiments on performance information use. Such experiments typically draw on theories from psychology and organizational science (Grimmelikhuijsen et al. 2017) – but we illustrate that other social science theories can be adapted to fit the micro-level context. In the case of performance measurement one should not neglect the role of performance standards set by central authorities (i.e. coercive pressure) as well as advice offered by professional organizations (i.e. normative pressure) – our findings indicate that both can be expected to influence performance information use by politicians. Hence, we add to a growing literature that indicates the important role of institutional pressures in determining the usage of management tools in public organizations (e.g. Decramer et al. 2012, Ashworth, Boyne, and Delbridge 2009).

Our paper illustrates that negativity bias can indeed strengthen the relation between institutional pressures and performance information use but only in specific cases. Although negativity bias is defined as a general psychological theory which indicates that negative information sparks stronger reactions than positive information in human beings (Rozin and Royzman 2001) and, specifically, in politicians (Lau 1982), this is not always the case when assessing performance information use. We add some nuance to the literature on negativity bias in politicians by illustrating that there are settings in which negative bias seemingly has but a limited role to play. Nonetheless, we do want to emphasize that negativity bias had an influence in two specific cases: It strengthened the impact of coercive pressures on performance information use to assess municipal finances and it made the effect of mimetic pressures on our semi-behavioral variable significant. We contribute to recent insights that negativity bias is a force to reckon with in political decision-making processes (e.g. Nielsen...
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and Moynihan 2017, Nielsen and Baekgaard 2015), but we do argue for further research to assess when it matters most or might not matter.

Finally, our findings have implications for policymakers and other public-sector practitioners worldwide. Simply enforcing performance measurement systems upon public organizations does not necessarily imply that relevant performance information is produced and used (Taylor 2011, George and Desmidt 2016). We illustrate that thorough scrutiny is necessary when devising ways in which performance information will be presented to politicians. Dashboards of performance indicators produced by central authorities are increasingly popular in the public sector (Edwards and Thomas 2005). Such dashboards should not simply present performance information and hope that this information will be used. Our insights can be used to adapt these dashboards so that they include a link with some form of coercive and normative pressure. We also indicate that negativity bias should always be acknowledged when devising these types of dashboard – politicians can be expected to react more strongly to negativity. We thus illustrate the importance of how performance information is “framed” in dashboards in order to encourage actual usage by politicians.

LIMITATIONS

Although our findings have clear implications for public administration theory and practice, some limitations need to be taken into account. First, due to the nature of survey experiments we had to design specific vignettes to operationalize the institutional pressures. While we believe this operationalization to be relevant, it does not fully grasp all aspects underlying these pressures. Other findings might be uncovered when different choices on how to operationalize these pressures are made. Second, we focus on behavioral intentions to use performance information and a semi-behavioral construct. Whether or not these result in actual performance information use behavior by politicians during decision-making is unclear. Third, we use a specific performance indicator (i.e. Self-Financing Margin) in a specific setting (i.e. Flemish municipalities). Replication of our findings is thus necessary before we can generalize to a broader population.
Future research can address these limitations. Scholars could focus on different ways to measure institutional pressures – for instance, coercive pressures can be operationalized through informal rules and mandates as opposed to formal regulation (Bryson 2011), mimetic pressures can be operationalized by looking at consultants advising several organizations (George and Desmidt 2014) and normative pressures can center on the role of educational institutions (Jarzabkowski et al. 2013). One could observe city councils or analyze meeting reports in order to identify how politicians actually behave in practice and what the role of performance information is (Buylen and Christiaens 2016). Finally, we encourage others to replicate our findings with methodological and conceptual tweaks to identify their generalizability (Walker, James, and Brewer 2017).

CONCLUSION

We initiated this paper by highlighting the paradox between the popularity of performance measurement in public organizations and the seemingly consistent stream of criticism arguing against performance measurement’s effectiveness in a public-sector context. In this paper, we went beyond this paradox by advocating a nuanced perspective where the question is not necessarily “does performance measurement work” but rather “when do politicians use performance information”. Indeed, performance measurement is a highly politicized theme and too often the political forces shaping performance information use have been neglected. We illustrated that, in part, whether or not politicians use performance information is influenced by the manner in which this information is presented to them. Simply “raining down” numbers might not necessarily work, rather one could think about linking performance information to performance standards set by a central authority or a norm advised by a reputable professional organization in order to spark a reaction from politicians. In conclusion, we encourage other scholars to explicitly incorporate politics into performance measurement studies thus identifying not only when but also why and how performance information is used by politicians.
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