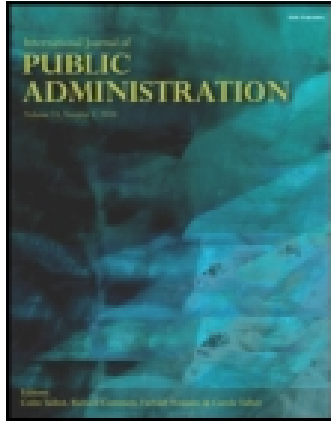


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# Is Performance Measurement Applicable in the Public Sector? A Comparative Study of Attitudes among Dutch Officials

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This article aims to study whether in the opinion of officials themselves, performance measurement can easily be applied in the public sector, and by what factors the differences in their views can be explained. Data from a survey of 26,876 civil servants were used. Among officials meeting certain criteria to be discussed, the majority are positive about the applicability of performance measurement. We conclude that supporters of the application of performance measures in their work are likely to see this as a tool that can be used to their own advantage, and which is in the interest of their organization.

Keywords: public sector, officials, performance measurement, opinions, survey

## INTRODUCTION

The use of performance measurement and performance management in the public sector remains a controversial issue. Performance management concerns making arrangements about the goals to be achieved, the way goals are measured, and to what extent these goals have actually been achieved. Utilization in the private sector has increased (see Neely, 1999; Neely, Richards, Mills, Platts, & Bourne, 1997), and there are some strong advocates of its utilization (see Broadnax & Conway, 2001) because of the identified benefits in encouraging people to achieve preset goals (de Waal, 2002; Lohman, 1999). It is nevertheless still doubted whether the measures present a valid picture of the content of the work. In other words, do they measure what they are intended to measure (see Au, 1996; Bevan & Hood, 2006; Bovaird & Löffler, 2003; de Vries, 2010; Guthrie & Parker, 1999; Guthrie & Schwoerer, 1994; Halachmi, 2011; Judge & Welbourne, 1994; Kanter & Brinkerhoff, 1981; Kaplan & Norton, 1992; Kluyers, 1998; Kouzmin, Loeffler, Klages, & Korac-Kakabadse, 1999; O’Faircheallaigh, Wanna, & Weller, 2000; Pollitt & Bouckaert, 2000; Rivenbark & Kelly, 2000; Spigelman, 2001; Steers, 1975)?

Already in 1994, Boschken argued that the complexity of public administration with various stakeholders implies that the utilization of simple measures of performance does not reflect the nature of public services. Therefore, different parameters must be used simultaneously (Boschken, 1994).

Werner and Asch (2007) go further and conclude on the basis of their research in healthcare that

performance measurement gets in the way of delivering good care, because it risks diverting attention from other more important but unmeasured aspects of care, provide(s) no priority for following guidelines likely to yield a large clinical benefit compared with guidelines likely to yield at best a small clinical benefit (p. 159)

and “may crowd out quality at the level of the patient that is equally important but that cannot be easily measured. Hence they reduce the quality that is most important for the patient, but cannot be easily measured” (cf. Halachmi, 2011, p. 25).

According to Halachmi (2011), achieving the objectives of performance measurement cannot be guaranteed. Performance measures may be dysfunctional, have unintended and even adverse consequences for quality and productivity, and can contribute to a reduced credibility of government among the service recipients of that government. The discussion described here illustrates the pros and cons of performance management in the public sector. It is about the question whether the nature of the work in the public sector is

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so substantially different from the private sector that performance in the first sector makes little sense and in particular whether work in the public sector is more complex than that in the private sector. The latter would make performance measurement difficult if not impossible.

The central questions in this article are: how do public officials themselves think about the applicability of performance measurement? And how can the differences in their views on this be explained?

This is particularly interesting because there is little research available on the opinions of people who are subjected to performance measurement. Commitment to performance measurement from those who are subjected to it is necessary to really make it work. If officials subjected to performance measurement think their performances have been measured well, this will enhance performance measurement. This article contributes to a further understanding of the discussion because it takes into consideration not only the organizational and management perspectives about performance measurement but also the perspective of the officials involved. We use various behavioral models to answer the question whether, in the opinion of the officials themselves, performance measures can be applied in the public sector and by what factors the differences in their views can be explained. This report is based on a survey of 26,876 civil servants in 2010. The survey was sponsored by the Dutch Ministry of the Interior and Kingdom Relations (MWM2, 2010). Some of the questions in the survey covered the subject matter. Officials were asked, for instance, to indicate to what extent they thought performance agreements about their work were easily measurable.

The analysis of this database allows us to determine those factors that explain the variation in the views of officials on performance measurement (cf. Lee, 2008). Before we present the results of that analysis, we first address three theoretical models by which views on the applicability of performance in the public sector can be understood. That discussion yielded six factors that are assumed to affect opinion on the applicability of performance measurement somewhat differently within each of the different models (Theory). Following that, the data are presented and subsequently the results of the analysis are given, followed by a discussion.

## THEORY

How can performance measurement be understood? Here we will look at three models. In the first model, the distinction between the public and private sectors is key (Parker & Gould, 1999). In the second model, the applicability of performance measurement from a technical perspective and rational understanding of performance management is central, and in the third model, the issue is examined within the frame of individual and organizational interests.

### Model 1. Public versus private sector

Regarding the first model, Au (1996) argued that the performance of an organization is a social construct that is particularly difficult to measure in the public sector. Parker and Gould (1999) mention four reasons why the public sector cannot be treated the same way as the private sector and why performance measurement cannot be used in the same way in both sectors. They argue:

1. The public sector acts in response to government policy that is ultimately based on collective choices. It treats citizens as a group rather than as individual consumers with certain rights.
2. The private sector provides goods and services to a certain level and at a certain price in response to supply and demand. It excludes consumers who do not pay for the supply of those goods and services. It acts in response to a consumer's demand regardless of his willingness to pay.
3. The private sector acts according to market principles, while the public sector is expected to be based on principles of social justice and fairness.
4. The private sector emphasizes effectiveness and efficiency, while the public sector is committed to the accessibility of government, fair treatment of citizens, and decent implementation of policy processes and compliance.

Orchard (1998) argued that deductive economic theories, such as public choice theory, fail to take into account the complexity of the modern public sector and its unique role in fulfilling the needs of very different groups of citizens. According to him, the public sector is fundamentally different from the private sector, and the latter's management tools, such as performance measurement, are therefore less applicable in the former sector. If this basic idea is also supported by workers in the public sector, it may be expected that the percentage of proponents of performance measurement in the public sector is significantly lower than in the private sector.

In addition, this model makes no distinction between sectors within the public and private sectors. Both sectors are seen as coherent wholes and the jobs within the two sectors will not be a distinguishing factor. That implies that on the basis of this model it may be expected that the opinions of officials about the applicability of performance measurement do not vary across sectors, either within the public sector or across positions. Whether this is a suitable model is open to debate.

### Model 2. Technical and rational perspectives

Although many scholars have underlined the specific nature of the public sector, Osbourne and Gaebler (1999) and Gore

(1993) favor the transfer of management practices used in the private sector into the public sector. Other authors believe that a distinction must be made between different sectors and positions in public administration. Halachmi (2011) for example believes that productivity in services at the local level can be properly measured, but that in matters of national security at the national level it is much harder to measure performance because in relation to such as national security far fewer concrete things are central. His reasoning is that if a position is less complex and more concrete, better performance measurement will be possible, and if the environment is less politically driven, better performance measurement is possible. Boschken (1994) similarly argues that major differences can be expected in the application of performance measurements. Within the public sector, there are complex and less complex tasks, and if the arguments are correct then one can expect less scope for performance measurements in case of greater complexity of the position.

Within this model, substantive, technical, and rational arguments are used to determine when performance measurement is meaningful. Based on the idea that performance measurement can help employees to eventually improve their work and the different positions and content of performance systems, it is argued that the applicability of performance management depends on the potential fit between performance measurement and actual functioning. This model also assumes that managers will be more pleased about the opportunities for the applicability of performance measurement than policymakers. Performance measures are primarily management tools. Hood (1998) speaks about management by numbers. Cook, Vasant, Stewart, and Adrian (1995) argue that performance measurement especially serves management purposes. Grady (1991) argues that performance measurement is, in the first instance, meant to provide clarity to management at all levels of the organization in regard to what extent strategies and objectives are realized: "performance measures must first of all provide all management levels with feedback on how well the strategies and objectives are being met" (p. 51). Lee (2008) and Forsythe (2001) also share the view that the opinions of the managers about the applicability of performance measurement differ from those of legislators and supervisors. Lee (2008) concludes: "Thus, it is possible that managers at departments and statutory authorities have different perceptions because of the different nature of their responsibilities" (p. 131).

Based on this model, it can be assumed that attitudes toward the applicability of performance measurement and management vary within the public sector. Finally, it may be expected that if stakeholders believe that there are problems in performance within the organization they will consider performance measurement as useful to define what the problem is and how to resolve it. In other words, from the rational perspective officials are positive about the use of performance measurement because it is an instrument that can be used to boost their own image. From this model, it

may be further derived that a higher percentage of officials with positive expectations regarding the applicability of performance management can be found among those officials who work in a less political environment (Halachmi, 2011), whose position is less complex (Halachmi, 2011), and especially among those officials holding managerial positions (Townley, Cooper, & Oakes, 2003).

However, previous empirical studies show that this is not always the case. Lee (2008) noted, for example, that often only senior management is optimistic about the opportunities of performance measurement. This can be explained by a model in which organizational interests are key. Such a model is based on the public choice approach as found in works of Downs (1967), Niskanen (1971), and Dunleavy (1991).

### Model 3. Individual and organizational interests

This model explains public choices as the result of officials pursuing their own interests and assessing the applicability of management instruments in terms of whether these make sense and are profitable for themselves and advantageous for their department. As Downs puts it, a bureaucracy is primarily a hierarchical system and "these superior-subordinate relationships are important for every official's chances for improving his position in the bureau, including promotion, higher salary, and success in furthering policies" (1967, p. 80). And as Niskanen (1971) puts it, any official will favor those changes that grow the budget of his department. Dunleavy (1991) said that officials especially will support measures that increase the prestige of their office. In this model, performance measurement and performance management are judged by their contribution in improving employees' position within the organization or in protecting, defending, and improving the position of the department within the organization. After all, performance measurement can create clarity about what the organization and the employee can expect from one another and to what extent the organization and the employee agree, whereas the absence of performance management can result in ambiguity and uncertainty. From this model, one would expect to find a high percentage of people favoring the applicability of performance measures, where uncertainty about the functioning is large and the organization could profit from performance management. This implies that one would expect to find a higher percentage of proponents within the public sector which suffers more from criticism of its poor performance than in the private sector. Even more proponents would be found among officials with complex positions in a politically steered organization when the criticism of bureaucracy is greatest and when officials have positive experiences with performance management. Moreover, it can be expected that those officials who feel that they and their colleagues function well are also more positive about the applicability of performance measurement than officials who are critical

TABLE 1  
Expectations Regarding the Effect of Factors on the Opinion About the Applicability of Performance Measurement According to Three Models

	<i>Model 1. The difference between the public and private sector is central</i>	<i>Model 2. Substantive, rational arguments dominate</i>	<i>Model 3. Public choice model</i>
Expected influence of:			
1. Sector: public versus private	Negative*	None**	Positive***
2. Context: politically steered or not	None	Negative	Positive
3. Function management or policy	None	Positive	None
4. Function: complex or not	None	Negative	Positive
5. Experience with performance measurement	None	None	Positive
6. Quality of functioning by colleagues	None	Negative	Positive

\*Within the model in which the specific nature of the public sector is central, a negative association between the type of sector (public versus private) and the views on the applicability of performance measurement is expected.

\*\*Within the model in which a technical rational perspective is central, it does not matter for the opinion about the applicability of performance measurement whether one refers to the public or the private sector as such.

\*\*\*From the public choice model in which personal and or organizational interests are central it may be expected that especially in the public sector, most proponents of performance measurement can be found.

about the performance within their organization. In the latter case, performance measurement is not in their interest.

We acknowledge that the literature on this topic shows that recently more nuances have been added to the approaches of performance management (see for instance Boyne, Meier, O'Toole, & Walker, 2006 and Talbot, 1999) and any modeling results in some simplification. In the theoretical discussion about the subject as well as in practice, the assumptions underlying the models can nonetheless still be seen as contrary explaining hypotheses about opinions on performance management.

In our view, the three models result in contrary hypotheses about the influence of different factors, including working in the public sector, the complexity of the position, operating in a more or less political environment, satisfaction with the functioning of the organization and experience with the applicability of performance management. This is shown in Table 1.

The three models produce opposite expectations about the effect of the six factors on attitudes toward the applicability of performance. In the following sections, we assess which model is corroborated best by empirical testing. The expected impact of the six factors on attitudes toward performance measurement is then examined in terms of six distinct hypotheses. We first present the data and subsequently the results of the analysis.

## THE DATA

The data used for testing the six hypotheses are from a survey carried out in 2010 by the Dutch Ministry of the Interior and Kingdom Relations in the so-called Personnel and Mobility Monitor (MWM2, 2010). All government sectors are involved in the sample of 80,000 employees, of whom 26,876 completed the questionnaire. No elected officials are

TABLE 2  
Sample Statistics

	<i>Population</i>	<i>Sample</i>	<i>Response</i>	<i>Response (%)</i>
<i>Total overhead</i>	855,454	80,000	26,876	34
<i>Governments</i>	288,865	28,500	10,596	37
Central government	116,280	10,000	3,841	38
Local government	148,933	9,000	3,354	37
Provinces	11,098	4,000	1,383	35
Judicial sector	3,393	1,500	562	37
Water boards	9,161	4,000	1,456	36
<i>Education and science</i>	438,911	38,500	12,414	32
Primary	162,131	9,000	2,953	33
High school	88,574	8,000	2,990	37
Lower level high school	47,446	5,000	1,553	31
Higher technical education	35,345	5,000	1,612	32
Universities	45,181	5,000	1,469	29
Research institutes	2,152	1,500	409	27
University Medical Centers	58,082	5,000	1,482	29
<i>Security</i>	127,678	13,000	3,866	30
Defense	67,879	7,000	1,980	28
Police	59,799	6,000	1,886	31

Source: MWM2 (2010, p. 22).

included. This resulted in a response rate of 34%, varying by sector between 27% and 38%. The characteristics of the Dutch public sector and the sample with the corresponding response rates are presented in Table 2.

A control group consisting of 2,586 respondents from the private sector (ranging from Agriculture and Fisheries, Industry, and Trade and Construction to Health and Welfare), with a response rate of 42%, also completed the questionnaire. This control group was included in the analysis. The questionnaire received by the samples in the public and private sectors consists of clusters. In these clusters, respondents answered questions about their personal background; the content of their jobs, mobility, and employability within



TABLE 3  
Variables and Indicators

<i>Variables</i>	<i>Indicators (questions from the questionnaire)</i>
<b>Dependent variable</b>	
Applicability of performance measurement	To what extent do you agree with the following statement? “My performance agreements are well measurable.” 0 Strongly disagree 0 Disagree 0 Neither agree nor disagree 0 Agree 0 Totally agree 0 Do not know/not applicable
<b>Independent variables</b>	
Public sector versus private sector	Given are two files within the POMO research. One among workers in the public sector and among workers in the private sector
Politically steered organization	In which department of the public sector do you work? (14 possible responses, see Table 2. A distinction is made between organizations with elected politicians at the top of the organization (National, Provinces, Municipalities and water boards) versus organizations where elected politicians are separated from the top of the organization (other sectors)).
Nature of work	Which description fits best to your work? (By sector, the question asked but otherwise had the same goal. Possible answers were, for example administration, management, control, ICT and finance on the one hand and policy research, policy development, communication, implementation, etc. to the other side.)
Work complexity	To what extent is the following statement applies to your work? “In my work people give the difficult tasks to me.” 0 Strongly disagree 0 Disagree 0 Neither agree nor disagree 0 Agree 0 Totally agree
Experience with performance measurement	Did your boss discuss your work results with you? Mark whether the subject was talked about and whether specific agreements were made. 0 Not discussed 0 Discussed, no concrete agreements 0 Discussed and specific agreements
Quality of functioning of oneself and colleagues	The following statement addresses the integrity of your (direct) colleagues. To what extent do you agree with this statement? My colleagues often do unproductive things in the boss’s time. 0 Completely Disagree 0 Disagree 0 Neither agree nor disagree 0 Agree 0 Totally agree

the organization; job satisfaction; working conditions; opinions about public service motivation; performance-related interviews with managers; and the degree of integrity of their colleagues. A number of items from the questionnaire were used for this study. The indicators for the variables from the six hypotheses are shown in Table 3. These indicators are the questions as asked in the survey.

For the dependent variable, the question that is indicative asked to what extent one’s performance is readily measurable. The variable was dichotomized, in view of the multivariate analysis into respondents who (completely) agree or (completely) disagree with the extent to which their performance was readily measurable.

Also with respect to the independent variables, we decided to dichotomize the answers to all of the indicators in light of the analytical method used.

For the purpose of testing the first hypothesis, the answers from officials from the public sector are compared to those from the private sector. This comparison is based on the responses of the respective respondents to the question of the applicability of performance measurement.

For the second hypothesis, a distinction is made between organizations with politicians at the top (central government, provinces, municipalities, and water boards) and those that are at some distance from politics (other sectors).

The answers to the variable associated with the third hypothesis—nature of work—were dichotomized to management or policy positions. This is the distinction between, for example, officials mainly involved in administration, management, control, ICT, and finance on the one hand and those conducting policy, policy analysis and

research, policy development, communication, implementation, etc. on the other.

The independent variables “complexity of the work” (associated with hypothesis 4) and “quality of functioning” (associated with hypothesis 6) are dichotomized into (completely) disagree and (completely) agree.

Finally, the variable associated with hypothesis 5—experience with performance measurement and management—was determined by two indicators. The first indicator is the question whether the work results of the respondents were discussed during the performance review with their supervisor. This indicator is dichotomized into whether or not one’s performance was discussed and whether or not concrete agreements about goals were made. The second indicator is the question whether the respondents have had a formal performance review in the past 12 months. This was already a dichotomy in the questionnaire.

These indicators are used in the next section to regress the opposite attitudes toward the applicability of performance measurement. We use cross tabulation in the case of each separate hypothesis, and multivariate binary logistic regression in the case of testing hypotheses 2 to 6, in a multivariate way.

## RESULTS

This section describes the outcomes of the empirical testing of the hypotheses presented. To begin, we consider whether there are significant differences between the private and public sectors when it comes to the opinion on the applicability of performance measurement and whether this view is dependent on the sector in which individuals operate, the type of position they hold, their experience with performance targets, and their opinion of their own performance vis-à-vis that of their colleagues. Subsequently, the aim is to conduct a multivariate logistic regression in order to determine whether the bivariate relations between the independent variables and the opinions about performance management hold when controlled for the influence of other variables. In addition, we will consider whether there is a negative or positive correlation between the indicators and opinions about the applicability of performance measurement.

Before addressing those hypotheses, we first discuss how the respondents in the public sector judge the applicability of performance measurement. Table 4 displays the results of attitudes toward the applicability of performance measurement of all 26,876 respondents.

Table 4 shows that most respondents (modus) have positive attitudes toward the measurability of performance: the majority (38.9%) of respondents agree with the possibility of measuring their performance objectives, which is 2.5-fold more than the number disagreeing with the applicability of performance measurement. Only 4.1% of the respondents indicated that they totally disagreed with the applicability

TABLE 4  
Attitudes Toward the Applicability of Performance Measurement in the Public Sector

<i>My performance agreements are well measurable</i>		
	<i>Frequency</i>	<i>Percentage</i>
Completely disagree	1,100	4.1
Disagree	4,153	15.5
Neither agree nor disagree	5,813	21.6
Agree	10,445	38.9
Completely agree	2,931	10.9
Don't know	2,334	9.1
Total	26,876	100

TABLE 5  
Attitudes Toward the Applicability of Performance Measurement Public Sector—Private Sector ( $N = 29,462^*$ )

<i>My performance agreements are well measurable</i>						
	<i>(Totally) agree</i>		<i>(Totally) disagree</i>		<i>Total</i>	
Public sector	13,376	49.8%	13,500	50.2%	26,876	100%
Private sector	1,216	47.0%	1,370	53.0%	2,586	100%
Total	14,592	49.5%	14,780	50.5%	29,462	100%

\* $N = 29,462$  of which 26,876 respondents from the public sector and 2,586 respondents from the private sector.

$\chi^2 = 7.120, \alpha = 0.008.$

of measuring their performance objectives, while 10.9% totally agreed.

The first question is whether there is variation between workers in the private and public sectors. Our first model resulted in the expectation that in the private sector a greater share of officials would be in favor of performance measurement. This seems apparent, but it does not show in reality. In Table 5, the attitudes of respondents toward the applicability of performance in both public and private sectors are presented.

This table shows that on average there is little variation between respondents in the private and public sectors in regard to their views on the applicability of performance measurement; however, employees in both sectors are sharply divided on the issue of whether their results are readily measurable, which is the opposite of what might have been expected according to the first model. A relatively larger proportion of workers in the private sector than in the public sector is skeptical about the applicability of performance measurement of their functioning. Perhaps the differences in views on applicability can be explained by differences in the extent to which employees interpret their own interests. Our second model argues that being under a slightly higher risk of dismissal in the private sector might affect views on the application of performance measurement, which could be seen as dangerous.

Within the public sector significant differences are seen. Table 6 distinguishes different governmental sectors with

**TABLE 6**  
Attitudes Toward the Applicability of Performance Measurement by Governmental Sector

<i>My performance agreements are well measurable</i>		
N = 26,876	<i>(Completely) agree</i>	
	<i>Number of respondents</i>	<i>Percentage</i>
Provinces	881	63.7
Water boards	877	60.2
Local government	1,811	54.0
Central government	2,047	53.3
Higher technical education	854	53.0
Universities	765	52.1
Police	977	51.8
University medical centers	675	47.3
Research institutes	190	46.5
Primary education	1,315	44.5
Defense	870	43.9
Judicial sector	244	43.4
High school lower level	658	42.4
High school higher level	1,212	40.8
Total	13,376	49.8%

$\chi^2 = 436.863, \alpha = 0.000.$

regard to opinions about the applicability of performance measurement (The answer to the statement: “My performance is well measurable.”).

From this table, it can be seen that within the public sector, wide variations exist with respect to the applicability of performance measurement. For example, officials in the most classic organizations (provinces and water boards) are very positive about the applicability of performance, with percentages of 63.7 and 60.2, respectively, just below which are the employees of municipalities and central government. These four organizations are all controlled directly by politicians. In contrast, officials in typical operational services such as education, the judiciary, defense, and research institutions are the least positive. This outcome supports our third model.

The three models also have different expectations about the extent and direction of the relationship between opinions on the applicability of performance measurement and the nature of the position held by respondents. Especially in the second model, performance measurement is primarily seen as a management tool and thus from this model it can be predicted that officials in managerial positions would be more positive about this than respondents with a policy position.

Table 7 shows the results of the distinction between management and policy positions with respect to the opinions about the applicability of performance measurement.

Respondents in management replied as expected according to the second model. Indeed, such respondents were slightly more positive about the applicability of performance measurement than policy personnel (respectively, 51.8%

**TABLE 7**  
Opinions about the Applicability of Performance Measurement Based on Nature of the Position

<i>My performance agreements are well measurable</i>						
	<i>(Completely) agree</i>		<i>(Completely) disagree</i>		<i>Total</i>	
	Officials with management position	5,509	51.8%	5,122	48.2%	10,631
Officials with policy position	6,285	47.4%	6,978	52.6%	13,263	100%
Total	11,794	49.4%	12,100	50.6%	23,894	100%

$\chi^2 = 46.386, \alpha = 0.000.$

and 47.4%), but although the differences are statistically significant they are minor.

Also, the three models have different expectations in regard to the extent to which the applicability of performance measurement is due to the complexity of the position. According to the first model, this should not matter and according to the second model, a negative relationship is expected. After all, the more complex the job the more difficult, by definition, the measurement of performance. Finally, according to the third model, a positive relation is expected, because it is precisely in such complex positions that uncertainty is greatest and performance measurement could be used to inform others that one is performing well. Whether there is a significant relation and in which direction is shown in Table 8.

This table illustrates that respondents with a complex position are more in favor of the applicability of performance measurement than those with a less complex position (respectively, 53.7% and 46.3%). This is in line with the third model.

Another reason why respondents are positive about the applicability of performance measurement may lie in their practical experience with working arrangements. Our opinions are often simply driven by experience. Sometimes very specific working arrangements are made during performance reviews, sometimes not. Depending on this, the opinion of respondents could vary. In particular, in our third

**TABLE 8**  
Opinions about the Applicability of Performance Measurement Based on Complexity of the Position

<i>My performance agreements are well measurable</i>						
	<i>(Completely) agree</i>		<i>(Completely) disagree</i>		<i>Total</i>	
	No complex positions	6,557	46.3%	7,612	53.7%	14,169
Complex positions	6,818	53.7%	5,886	46.3%	12,704	100%
Total	13,375	49.8%	13,498	50.2%	26,873	100%

$\chi^2 = 146.368, \alpha = 0.000.$



TABLE 9  
Opinions about the Applicability of Performance Measurement  
Based on Experience with Performance Agreements

<i>My performance agreements are well measurable</i>						
	<i>(Completely) agree</i>		<i>(Completely) disagree</i>		<i>Total</i>	
No experience	4,598	33.3%	9,209	66.7%	13,807	100%
Experience	8,778	67.2%	4,291	32.8%	13,069	100%
Total	13,376	49.8%	13,500	50.2%	26,876	100%

$$X^2 = 3,079,916, \alpha = 0.000.$$

model, this is expected. Whether that is the case can be seen from Table 9.

Respondents with practical experience of making performance arrangements are indeed more positive about the applicability of performance measurement than respondents without such experience (67.2% and 33.3%, respectively).

Finally, opinions on the adequacy of performance measurement could result from the review of one's own performance against that of colleagues. In our first model, this would make no difference. According to the second model, increased performance measurement would be necessary if the organization functions poorly. According to the third model, it would be desirable to apply performance measurement just to make clear that the organization is functioning properly. Table 10 shows which models have empirical support.

The first issue to be remarked upon in Table 10 is that only a relatively small percentage of respondents (17.4%) is negative in regard to the performance of colleagues. Within this group of respondents, a smaller percentage is positive about the applicability of performance measurement (45.2%). Respondents with a negative opinion on the performance of colleagues in the organization are also negative about the applicability of performance measurement, although the differences are minor. This again conforms to the expectations of our third model.

TABLE 10  
Opinions about the Applicability of Performance Measurement  
Based on Opinion about the Functioning of the Organization

<i>My performance agreements are well measurable</i>						
	<i>(Completely) agree</i>		<i>(Completely) disagree</i>		<i>Total</i>	
Positive about functioning of colleagues	11,262	50.7%	10,937	49.3%	22,199	100%
Negative about functioning of colleagues	2,114	45.2%	2,563	54.8%	4,677	100%
Total	13,376	49.8%	13,500	50.2%	26,876	100%

$$X^2 = 47.292, \alpha = 0.000.$$

TABLE 11  
Multivariate Explanation of Opinions About the Applicability of  
Performance Measurement

	<i>Sig.</i>	<i>Exp(B) Odds ratio</i>
Experience with performance measurement	0.000	3.653
At least one performance review last year	0.000	1.541
Complexity of work	0.000	1.379
Political context	0.000	1.209
Quality of work by colleagues	0.000	1.160
Nature of work: management	0.002	1.094
Constant	0.000	0.252

Presented are the outcomes of the logistic regression.  
Nagelkerke  $R^2 = 0.165, N = 23,890.$

The vast group of respondents positive about the performance of colleagues ( $n = 22,199$  or 82.6%) is deeply divided. The differences among this segment of the respondents are minor (50.7% vs 49.3%).

While providing insightful results, the bivariate comparisons made above do not paint a complete picture because the significance of bivariate relationships can change when controlling for third variables.

In Table 11, the results of a logistic regression are presented for all the independent variables which, in the bivariate analysis, proved to have a significant effect on opinions toward the usefulness of performance measurement. This table shows the odds ratio and the significance thereof. The significance indicates whether an explanatory factor contributes significantly to the explanation of the differences in views among officials about the applicability of performance measures in their sector or whether this could have resulted by chance. The odds ratio (exp. B) indicates the direction in which the relation is heading: if lower than 1.0 the relation is negative, if higher than 1 the relation is positive. The independent variables in the table from top to bottom are ordered by the degree of influence: the higher the more "important" its impact.

Table 11 shows that the impact of all factors in a multivariate analysis remains significant and continues to affect opinions on the applicability of performance in the public sector, even when controlled for the impact of the other factors. Especially among officials with experience in concrete work arrangements, there are many positive judgments about the applicability of performance measurements. This table also shows that officials dealing with more complex tasks, those working in a political context, those with positive views about the performance of their colleagues, and those in managerial positions are more positive about the applicability of performance measurement. Among those with experience in concrete work arrangements, with at least one formal interview in the previous year, functioning in a political context, working in managerial positions, and with positive judgments about the performance of their colleagues, the majority are positive about the applicability of

performance. Among policy officials who do not meet these characteristics a minority are positive about the applicability of performance measurement. This is the interpretation of the outcomes of Table 11. The main explanation for opinions about the measurability of one's own performance is found in the concrete experience of working arrangements. Performance measurement is clearly much more applicable according to officials as they already have to deal with specific agreements in their daily work; they are more positive than officials with no concrete performance agreements. Having a regular formal performance review with a manager ensures that officials are more positive about performance measurement. This is especially consistent with our third public choice model stressing the interests of the organization.

## DISCUSSION

Every empirical study involves limitations, as does this study. Caution with respect to results is usually warranted, and that is the case in the present study. The conclusions are based on a secondary analysis of data gathered for other purposes. Data collection via a self-administered questionnaire is assumed to have resulted in less bias. The risk of social desirability in answering questions was reduced by the utilization of this type of self-administered questionnaire. Personal, one-on-one interviews with officials would probably have resulted in more social desirability effects (Lako & Rosenau, 2009).

This article reported on the applicability of performance management in the public sector from the perspective of public officials. The latest research shows that in 2010 the views held among officials about the applicability of performance measurement at work were more positive than might be expected based on theories that emphasize the complexity of the nature of the public sector. This would be markedly different from the private sector in that performance measurement in the public sector is undesirable and unfeasible. This theory was developed in this article as one of the three possible frameworks within which the opinions on performance measurement can be explained. The hypotheses ensuing from this framework are, however, not supported by the outcomes of the empirical analysis. The percentage of officials supporting performance measurement in the public sector is actually higher than that in the private sector. It is also evident from our analysis that the public sector cannot be seen as a coherent whole in this regard.

From an alternative theoretical framework (e.g., from a model in which substantive, technical, and rational considerations of the possibilities of the applicability of performance measurement are central), performance measurement would certainly be possible for less complex positions in non-political environments, and necessary if there is poor quality

in the positioning within the organization. This model, however, also gains little support in the empirical analysis.

What is clear from the outcomes of this research is the following: officials who are positive about the applicability of performance are found particularly in organizations that are controlled directly by politicians (municipalities, provinces, water boards, and local government), by individuals in complex managerial positions, those having positive judgments about the quality of the performance of colleagues within their organization, and those who have experience of performance management.

This is in line with our third theoretical model—the public choice model. In this model, it is assumed that officials who support the application of performance measures in their work are likely to see it as a tool that can be used to their own advantage, and which is in the interest of their organization. This so-called public choice model gets most support in this study. This model is able to explain why officials who are most affected by so-called bureaucrat bashing, namely those in municipalities, provinces, water boards, and central government, are significantly more positive about the applicability of performance measurements, especially when they carry out complex work; and their colleagues also perform well. They see this as a desired tool to “prove” to the hostile outside world that they work hard, effectively, and efficiently and meet their objectives.

The resulting conclusion is that the framework from which the potential of performance management and performance measurement in the public sector is assessed may need adjustment, and corroborates the findings from De Lancer Jules and Holzer (2001). From the point of view of public officials favoring its use, the instrument of performance measurement could be very useful to reverse the negative image of the public sector. More research is needed to verify whether that adjustment of the interpretive framework with appropriate measures actually contributes to a better image. This plea for more research is even more understandable against the background of an increase in bureaucrat bashing.

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