

# A comparative analysis of the development of performance-based management systems in Dutch and Norwegian local government

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## Abstract

The purpose of this paper is to compare performance management in Dutch and Norwegian municipalities. The analysis of performance budgets and annual reports from nine municipalities from each country shows that performance management changed during the 1990s. Contingent factors such as fiscal stress, opportunity for change, organizational size (uncertainty), and characteristics of the policy fields (ambiguity) were analyzed to explain this pattern. The results indicated two important implications for public management and for contingency theory: the Nordic, incremental and consensual model may give substantial opportunity for change; and the conventional wisdom in organizational control requires further development regarding political control. © 2002 Information Age Publishing Inc. All rights reserved.

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## Introduction

This paper deals with the role of management accounting in public sector reforms. Such reforms are often denoted as New Public Management (NPM) in Europe (Hood, 1991; 1995). Comparable developments are known as reinventing government in North America. NPM reforms typically have evolved around six dimensions (Pollitt & Bouckaert, 2000): Privat-

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ization, marketization, decentralization, output orientation, quality systems, and intensity of implementation. This paper particularly addresses public sector reforms regarding output orientation and intensity of implementation in the municipal sectors in the Netherlands and Norway. These countries share several important cultural traits (Hofstede, 1984), rely on extensive use of the welfare state (Lijphart, 1999), and have developed along the highly consensual, Nordic political model (along with the Scandinavian countries and Finland), which differs from more radical change patterns in countries like the United Kingdom and New Zealand (Pollitt & Bouckaert, 2000).

A main characteristic of the focus of control in NPM is output orientation and the introduction of performance-based management systems as management by objectives and performance measurement, what we in this paper have called performance management systems. The majority of the ten countries (including the Netherlands but excluding Norway) which Pollitt and Bouckaert (2000) studied became active in developing indicators for the performance of almost every imaginable public service during the period 1980–1998. In several countries the central government used performance indicator (PI) systems, for instance, league tables to reassert control over lower tiers or local units. During the 1990s the Netherlands pursued a strategy of integrating performance measurement with the budget process (van Helden, 1998; Pollitt & Bouckaert, 2000). Currently the Norwegian government is implementing a mandatory, nationwide local government performance measurement and reporting system, which may in the long run have the potential for extensive central control in its widespread decentralization reforms.

Pollitt and Bouckaert (2000) argue that over the last twenty years one might discern a trajectory that runs from the use of PIs principally as supplementary or background information, towards their use for a variety of purposes. Such purposes could be to support specific decisions, to compare different organizations or functions in benchmarking, to determine budget allocations, and also as a major input to human resource management. Official publications of the late 1990s contained far more performance information than was available in 1980, according to Pollitt and Bouckaert (2000). However, their study was mainly on central government. In this paper we will focus on the dynamics of performance-based management systems in the local government of two countries in more detail.

The purpose of this paper is to study one crucial issue of NPM, that is, the introduction of performance management systems in local government. We have chosen to study the development of performance management in the Netherlands and Norway in a selected number of municipalities of different size categories during the 1990s. Thus, this description and analysis is both cross-sectional and longitudinal. The rest of this paper is outlined as follows. The second section deals with general trends of public sector reform in the Dutch and Norwegian municipal sectors for the period 1980–1999. The third section contains a theoretical framework and hypotheses for examining performance management in local government. The fourth section presents the research design for the empirical examination. The fifth section analyses the empirical results about performance management systems in nine municipalities in each of the two countries. The final section of the paper systematically discusses these results and ends by pointing to implications for public management theory and with suggestions for future research.

## General trends of public sector reform in the Dutch and Norwegian municipal sectors

This section briefly examines public sector reforms in Dutch and Norwegian municipalities during the 1980s and 1990s. By using Hood's framework on public sector reform, it also aims to provide some tentative explanations for these reforms.

### *The Netherlands*

Local government in the Netherlands currently encompasses 537 municipalities. The number of municipalities has gradually decreased during the last few decades due to amalgamations (mergers). In the 1980s, some large-scale municipalities in the Netherlands took the initiative to change their control systems. The most important features of these changes were the transition from input to output control and the replacement of the traditional centralized organizational structure by decentralized organizational devices. New systems of performance measurement were a key aspect of these changes: output control required newly specified PIs, and decentralized control could not be fruitfully applied without improving the accountability of organizational units. Schrijvers (1993), Lawton and McKevitt (1995), Herweijer and Mix (1996) and Korsten (1996) investigated reforms in the city of Tilburg, and ter Bogt and van Helden (1999) in the cities of Enschede and Groningen.

Around 1990, the Dutch Ministry of Home Affairs took the initiative to stimulate municipalities—irrespective of their scale—to apply business tools such as output budgeting, responsibility accounting, variance analysis, and cost allocation. This initiative has become known as BBI (in Dutch: *Beleids- en Beheers Instrumentarium*), which may be translated as Policy and Management Instruments for municipalities (PMI). It gives specific instructions and recommendations concerning the application of different kinds of tools that should make local government organizations more effective and efficient. The PMI project used a planning and control focus: from planning via reporting and replanning to evaluation. In this respect, various new tools of governance and management were developed. The project started in 1988 and finished in 1995 (Houwaart et al., 1995; van Helden, 1998).

A recent survey showed that about 70% of the municipalities in the Netherlands applied PMI instruments. This survey further indicated that the larger the municipality, the higher was the average usage of these instruments. Although output budgeting considerably contributed to changes in municipal organization, the impact of PMI tools on effectiveness and efficiency turned out to be moderate (Moret, Ernst, & Young, 1997). Two other empirical examinations only involved small samples of 16 and 8 municipalities, respectively, with a size ranging from 13,000 to 50,000 inhabitants. Although two thirds of these municipalities applied output budgeting, its impact was considered to be rather poor, mainly because of a lack of clear performance standards and due to the absence of a performance-oriented organization culture (Welschen, 1997; van Helden & ter Bogt, 2001).

### *Norway*

435 municipalities and 18 counties currently constitute local government in Norway. Since the early 1980s there have been several experiments and reforms in the Norwegian

local government regarding decentralization, frame budgeting, management by objectives (MBO), accrual accounting, annual reporting, and performance measurement; see, for example, Baldersheim and Ståhlberg (1994) and Høgheim, Monsen, Olsen, and Olson (1989). Here, only the development of performance measurement in municipalities will be reviewed.

In Norway six municipalities have, since the mid 1980s, been active in the process of developing, collecting, and monitoring PIs into a method which could be called the comparable data method (CDM) (Johnsen, 1999a). This aggregated management data for cooperating large municipalities network (*aggregerte styringsdata for samarbeidende storkommuner*, ASSS) was founded in 1986. In 2001 four more large cities became members. The network projects have been carried out in close cooperation with a university college, a research institute, and later on with central government. By comparing indicators of efficiency, effectiveness and equity in the allocation and redistribution of scarce municipal resources, the municipalities were provided with information that could be used in their organizational control, learning, and planning processes. The central government has since the mid 1990s started the implementation of a mandatory, nationwide local-to-central government performance measurement and reporting system, the KOSTRA project (*kommune-stat rapportering*). In the period of study for this paper, neither annual reporting nor performance measurement was mandatory in the Norwegian municipalities. However, it has been estimated that 98% of the municipalities published annual reports in 1996, and almost all of those publishing annual reports also used some form of performance measurement, although with a high degree of variety. 83% of the municipalities that published annual reports also used MBO (Johnsen, 1999b).

The CDM project steering committee decided in 1999 that the network and its projects on development and monitoring of PIs should also be continued after the year 2001, when the KOSTRA project was planned to be launched full scale. The reason for this duplication was that the network acknowledges the need for alternative competence centers on monitoring issues in addition to central government. Furthermore, the six municipalities wanted to have their own, established monitoring system in place as a backup in case the KOSTRA project turned out to have too many reverse effects (Hood, 1998), or face too much resistance and hence fail. Status by year-end 2000 was that KOSTRA has been launched full scale, encompassing mandatory financial and performance reporting from all 435 municipalities to central government and the national bureau of statistics (Statistics Norway) during 2001. Simultaneously, the network of six municipalities decided to extend their voluntary network cooperation at least until 2004.

### *Causal factors for change*

Hood (1995) tried to explain why some OECD countries introduced NPM and others did not. He suggested that reforms of public management are dependent on both motive and opportunity. The motive was supposed to be the promise of resource saving in the case of acute fiscal stress or a relatively oversized governmental sector. This refers to the so-called financial stress hypothesis. The opportunity for reform needs the existence of an integrated public sector, which offers politicians a direct possibility of influencing the desired change over the entire public sector (Hood, 1995; p. 105): “the existence of some ‘Archimedean

Table 1  
Comparison of NPM developments in the municipal sector in the Netherlands and Norway

		The Netherlands	Norway
NPM change	Initiative and diffusion	Large-sized municipalities were pioneers; later on, many municipalities followed	Large-sized municipalities were pioneers; later on, many municipalities followed
	Impact	About 70% of municipalities introduced new tools; with a rise of municipal scale, the application rate of the new tools is higher	In 1996, 98% of the municipalities published annual reports. Almost all of those publishing annual reports used some form of performance measurement, although with a degree of variety. 83% of those publishing annual reports used MBO.
NPM causal factors	Financial stress	Existent, but moderate	Some fiscal stress after fall in the crude oil price in 1986 and 1999
	Opportunity for change	Existent, but discretion for individual municipalities; consensus-based gradual change	Existent, but discretion for individual municipalities; consensus-based gradual change

point' from which would-be reforming politicians can influence the political sector as a whole." Hence, countries with both a motive and an opportunity are the most likely to adopt the NPM framework. Hood (1995, p. 106) concluded: "that countries . . . like the UK, France, the Scandinavian countries and possibly the Netherlands . . . would be the type most prone to make rapid strides towards the development of NPM in the 1980s." We will now use Hood's framework to explain public sector reforms in the Dutch and Norwegian municipal sectors.

Table 1 summarizes information on the initiation and diffusion of NPM-like systems as well as the impact of the two causal factors, which we have addressed in this section. In considering the financial stress hypothesis it has to be noted that the size of the governmental sector in the Netherlands, defined as collective expenditure as a percentage of national income, turned out to be large in the 1980s when compared with other European countries. Moreover, local government in the Netherlands was highly dependent on central government funding. Consequently, the incentive for adoption of NPM at the central level due to fiscal stress may also be transferred to the local level. In the early 1980s the Dutch national government was faced with serious deficit problems. The deficit, expressed as a percentage of national income, was 9.3% in 1983. In 1998, due to various reforms (like budget cuts, decentralization, and contracting-out) the deficit had diminished to nearly zero (Cabinet of the Dutch Central Government, 1997). About 80% of municipal revenues in the Netherlands came from central government, in the form of both general and specific grants. Westhoff's (1993) analysis of the development of the national general grant for Dutch municipalities during the years 1983–1992 showed a real decrease in this grant per inhabitant of 8%. Consequently, Dutch municipalities have had to cope with budget cuts by the national government during the last 10 to 15 years. However, the extent to which municipalities suffered from budget cuts by the national government—about 8% per inhabitant over ten years—seems to be relatively moderate (see also van Helden, 2000).

In addition to financial stress, there was also an opportunity for change in the management of Dutch local government. The structure of government in the Netherlands can be described as a decentralized unitary state, with the national government having a major influence over the tasks carried out by the provinces and municipalities through both national law and the provision of grants (Toonen, 1987). The national government intensively encouraged changes in Dutch local government, and the national organizations of Dutch municipalities also supported these changes. However, municipalities could act autonomously within the boundaries of national law, which implies that national government only could stimulate rather than enforce the adoption of new management tools. Hence, the opportunity argument for adoption of NPM was only existent to some extent.

In Norway, financial stress has varied throughout the 1980s and 1990s. Public sector financial stress was especially high during the abrupt fall in crude oil prices in 1986, and to some extent present after the fall in crude oil prices in 1999. The Norwegian municipalities were to a large extent dependent on central government funding. Consequently, the increased financial risk as a consequence of the country's higher financial dependence on the petroleum sector was an important background factor for the Norwegian government's initiation of the KOSTRA project in the early 1990s. The KOSTRA project's initial aim was to establish enhanced central government control over local government finances, especially as the fiscal dependence on petroleum revenues increased and the government wanted to pursue decentralization reforms in the public sector.

In Norway there have been extensive decentralization reforms, but local authorities were probably still the most centrally controlled in the Nordic countries (Baldersheim & Ståhlberg, 1994). Decentralization has not necessarily been a matter of decentralized financial discretion. Regarding privatization and marketization, Norway has probably hitherto had least use of these elements, between the two countries. On the other hand, Norway probably has the longest experience with integrating national accounts and public sector budgeting (central planning) of the two countries. Norway still has extensive elements of central planning and, simultaneously, a relatively decentralized public sector compared to other European countries.

Partly because of the multiparty governmental system—both at the central and the local level—innovations have to be introduced gradually both in the Netherlands and in Norway. Therefore, change processes are based on the wish to reach consensus and consequently will take a long time. PMI in the Netherlands and the six municipalities performance measurement network in Norway have made municipalities more aware of new possibilities of control and management in times of restrictions on spending. However, these reforms lack the sharp edges of revolutionary change that are based on the assumption that anything business firms do is preferable and therefore should be copied by the public sector. PMI, for instance, also took account of the need to obtain support: instead of the radical change of a leading group, we could see a broadly based and therefore perhaps somewhat less distinctive but consensual movement of change (van Helden, 1998). In Norway, the implementation processes have encompassed networks and widespread use of bottom-up processes (Johnsen, 1999a). The local government performance-based systems both in the Netherlands and in Norway, therefore, seem to have evolved in an incremental manner representative of the Nordic, consensual model of politics.

## Theoretical framework and hypotheses

We will now develop a theoretical framework for the examination of performance management systems in local government based on the conventional wisdom on organizational control (Ouchi, 1979). From this framework, four hypotheses will be derived.

The contemporary conventional wisdom in organizational control, for instance, Hatch (1997, chapter 11 and Fig. 11.5), to a large extent builds on a series of contributions that William Ouchi published in *Administration Science Quarterly* in the 1970s and 1980s, summarized in Ouchi (1979). The conventional wisdom was informed by developments in agency theory (Jensen & Meckling, 1976), contingency theory (Wildavsky, 1986), and sociological new institutionalism (Meyer & Rowan, 1977) in the 1970s, not on the classical contingency theory from the 1960s, that is, Thompson (1967).

The conventional wisdom in (public) management control is that output control, as performance-based management systems, is contingent upon uncertainty regarding means and ambiguity regarding ends. Uncertainty is defined as problems of relating input (means) to output (ends) in the sense of uncertainty of technology. Such uncertainty may, for instance, stem from complexity due to size or from asymmetric information, for example, that the agent knows more on technology than the principal. Ambiguity is here understood as difficulty defining or agreeing upon goals. Ambiguity is also often defined as the lack of ability to measure outputs. Hence, ambiguity may be due to problems of defining or agreeing on goals in the different policy fields. Ouchi (1979) asserted that when there are certain technology and unambiguous organizational goals, the principal either uses input control or output control. When there are unambiguous goals but uncertainty, for instance, asymmetric information, then the principal will use output control. These two explanations are based on agency theory. When there is ambiguity in organizational goals but certain technology, then behavior control is used typically by rule control and standardization as in classical bureaucracy. Interestingly, in political institutions one may assume that often goal ambiguity and uncertainty are present simultaneously. According to the present conventional wisdom on organizational control, organizations will then not employ output control as instrumental control structures. Instead, such performance management models will be used for external legitimacy but only decoupled to internal control structures (Meyer & Rowan, 1977). Meyer and Rowan (1977) argued that organizations and environments redefine the nature of techniques and output so that ambiguity is introduced and rights of inspection and control are lowered. A close alignment in institutionalized organizations would merely produce a record of inefficiency and inconsistency. Such organizations, therefore, decouple structure from activity. Hence, organizational control efforts, especially in highly institutionalized contexts, are devoted to ritual conformity, both internally and externally.

Along with the economics of organization, the symbolic, decoupling proposition has been criticized for neglecting power issues too easily (DiMaggio & Powell, 1991). The control structure that organizations use internally instead of output control, when there is a great deal of uncertainty and ambiguity, is clan control. This is the employment of professionals together with the use of complexity reducing and conflict settling processes such as traditional line item budgeting (Wildavsky, 1986). Hofstede (1981) elaborated on both Wildavsky's (1986) and Ouchi's (1979) arguments. Some new distinctions as expert, intuitive,

judgmental, trial and error, and political control (negotiations) were introduced, but the basic neglect of performance management as a control instrument under contingencies of uncertainty and ambiguity was upheld.

In summary, conventional wisdom in organizational control has well-developed propositions. For the study of organizational control, the interesting part of this picture is that the three perspectives outlined above, agency theory, contingency theory, and new institutionalism, all have propositions with divergent explanations. Agency theory states that performance management is used under asymmetric information and uncertainty. Classical contingency theory (Thompson, 1967) also stated that complex organizations use performance measurement under uncertainty, both to reduce uncertainty and as legitimacy. However, the widespread conventional wisdom states that under uncertainty and ambiguity complex organizations mainly reduce complexity by adopting budgeting or by employing professionals if there is simultaneously ambiguity. Hence, one should not expect to find widespread use of performance-based systems unless these systems are used as symbols. Thus, at present, a widely held explanation of organizational control structures comes from the sociological, symbolic perspective of new institutionalism. The political use of performance management systems under contingencies of uncertainty and ambiguity does not seem to have received much scholarly attention in public management. In this paper we also want to address this aspect. From the conventional wisdom framework we have formulated four hypotheses.

*Hypothesis 1:* Low degree of uncertainty in services and low degree of ambiguity in policy fields is correlated with either use of input control or output control (performance management systems).

*Hypothesis 2:* High degree of uncertainty in services and low degree of ambiguity in policy fields is correlated with output control (performance management systems).

*Hypothesis 3:* Low degree of uncertainty in services and high degree of ambiguity in policy fields is correlated with little use of output control (performance management systems).

*Hypothesis 4:* High degree of uncertainty in services and high degree of ambiguity in policy fields is correlated with little instrumental use of output control (performance management systems), but can be correlated with a high use of output control for symbolic purposes.

Table 2 gives an overview of these hypotheses. Hypotheses 1 and 2 both assume low ambiguity, but they differ regarding the extent to which uncertainty is existent. With low uncertainty (hypothesis 1), either input or output control is possible, which indicates that performance-based management is only optional. On the contrary, with high uncertainty (hypothesis 2) output control and thus performance-based management is likely. Hypotheses 3 and 4 share that they both assume high ambiguity, but they differ with respect to the assumption made on uncertainty. With low uncertainty (hypothesis 3), behavior or rule control is expected, which makes performance-based management unlikely. The case of high uncertainty (hypothesis 4) leads to decoupling, clan control, or political control. Then performance-based management is likely, but more in a symbolic than a rational manner.

The influence of ambiguity on performance-based management can be derived from our



Table 2  
The conventional wisdom on organizational control

	Uncertainty on means-ends relationships (technology)	
	Low	High
Ambiguity on goals		
Low	I Input or output control Performance-based management is optional	II Output control Performance-based management is likely
High	III Behavior (rule) control Performance-based management is unlikely	IV Decoupling, clan control, and political control Performance-based management is likely, but mainly for symbolic reasons

Note: Adapted from Ouchi (1979) and Hofstede (1981).

theoretical framework by a switch from either box I to box III, or from box II to box IV in Table 2. However, only in the case of low uncertainty is this relationship conclusive: growing ambiguity combined with low uncertainty will make performance-based management less likely (a switch from box I to box III in Table 2). On the contrary, with high uncertainty conclusive expectations are impossible, because extensive use of performance-based management is expected irrespective of the degree of ambiguity. The difference between low and high ambiguity only relates to a rational and symbolic use of PIs, respectively (see Table 2, the transition from box II to box IV).

The influence of uncertainty on performance-based management is univocal, irrespective of the degree of ambiguity. An increase in uncertainty makes performance-based management more likely (a transition from box I to box II or, from box III to box IV in Table 2).

A problem in empirical tests of hypotheses based on the conventional wisdom is, of course, that management models in practice often are a blend of different types of organizational control models and these are used both for instrumental and symbolic purposes simultaneously, something that Ouchi (1979) acknowledged. Furthermore, it is by definition empirically difficult to measure ambiguity. This means that it is very challenging to perform strict tests of such hypotheses. Any empirical findings must therefore be discussed in relation to interpretations of the data and, of course, in relation to plausible alternative explanations of the hypotheses.

## Research Design

We used a simple cross-sectional, time-series design for our comparison. Moreover, we analyzed contrasted groups in our study (Eisenhardt, 1989). Various contingent factors have been incorporated as independent variables in this analysis, such as organizational size as an indicator of uncertainty and characteristics of the policy fields in question as an indicator of ambiguity. In both countries nine municipalities of various sizes have been selected: three municipalities from the category of between 20,000 and 50,000 inhabitants, three munic-

palties from the category of between 50,000 and 100,000 inhabitants, and three municipalities from the category between 100,000 and 200,000 inhabitants. Organizational (municipal) size is a common, but not unproblematic, indicator for uncertainty (Kimberly, 1976). In the public choice literature (Mueller, 1989) size is assumed to relate to asymmetric information, which causes uncertainty for the principal. For example, when the number of bureaucrats increases, there are more bureaucrats who can cooperate in utilizing information that the principals, politicians, do not have access to. On the other hand, organizations often counter the increased uncertainty and complexity associated with increased size by decentralization (Gordon & Smith, 1992). Still, we think that not all uncertainty caused by increased numbers of transactions and relations resulting from relatively large size can be solved by decentralization. Therefore, we used size as an indicator for uncertainty in this study. Ambiguity is approached by assuming that certain policy fields, for example, culture and religion, have more ambiguity than other policy fields, for example, roads and transportation.

Measurement of the dependent variable, municipal performance management, caused some challenges in commensurability between the two countries. In Norway, municipal performance management was mainly documented in the annual reports. In the Netherlands (as in the US), the reporting of performance and PIs in the public sector annual reports was not well developed. Instead, the budget documents contained some information on PIs (Pollitt & Bouckaert, 2000). Therefore, in this study we analyzed performance management in the municipal annual reports of Norway and in the municipal budget documents of the Netherlands. In the Netherlands, the municipal executive prepares both the annual budget and the annual report, and the municipal council is the main principal and main stakeholder. This holds true also for Norway, but the executive is here termed the chief administrative officer. It therefore seemed appropriate to compare the Dutch budget documents with the Norwegian annual reports. We analyzed the performance budgets of the Dutch municipalities for the years 1993, 1996, and 1999. Because some of the Norwegian municipalities did not publish annual reports in 1993, we only analyzed annual reports from 1996 and 1999. This data collection was performed in order to depict the extent to which performance measurement had increased or decreased. It should be noted that because Norwegian municipalities may report PIs and statistics also in budgets and not only in the annual reports, the data we compared may to some extent underestimate the use of performance measurement in Norway relative to the Netherlands.

We analyzed the documents by quantitative content analysis based on a research instrument developed by Johnsen (1999b). Documentation of the research instrument, including definitions of the various types of qualitative verbal conclusions and quantitative PIs, is available from the authors. The research instrument counted frequencies of performance measurement items as PIs and verbal judgments and reports these items in an additive index. The distinction between PIs and verbal conclusions relates to the quantitative character of the first and the more qualitative nature of the latter. Verbal conclusions are policy statements, conclusions regarding needs, evaluations, and neutral statements regarding efficiency, effectiveness, or equity in service production and provision.

We categorized all the PIs and verbal conclusions according to the policy fields to which they belonged. The following policy fields (PFs) were distinguished:

PF1: general municipal administration;  
PF2: kindergartens and education;  
PF3: health care and social services;  
PF4: housing, development of commerce, and environmental affairs;  
PF5: culture and religion;  
PF6: infrastructure services; and  
PF7: roads and transportation.

Moreover, we categorized the PIs according to the following seven types:

PI1: capacity utilization (the extent to which a fixed asset is used, as a percentage of total capacity);  
PI2: partial productivity ratio (production volume divided by a certain input category);  
PI3: index of standard or quality (the extent to which a service level satisfies a certain target level);  
PI4: average costs (total costs of a service divided by number of service units);  
PI5: distribution ratio (number of service units delivered);  
PI6: financing ratio or full cost ratio (the degree to which fees will cover costs); and  
PI7: coverage of needs ratio (the actual units delivered of a service divided by the number of units to be delivered to a target group).

Content analysis poses common problems regarding validity and reliability, as do other methods of data collection (Krippendorff, 1980; Weber, 1990). After investigating some of the Dutch municipal budgets, we found that some or large parts of these documents did not contain quantitative information regarding PIs or assessments of achievements of goals, even though the text labeled some items as such. For example: “we want to make a policy note about issue A,” or “we are going to make a plan about topic B.” In general, only quantitative (factual, historical) data are to be collected as PIs, not planned data (goals, targets, etc.). So, it was not always possible to relate a planned performance to an actual performance. Therefore, on distribution ratios (PI5) planned production of services was coded as a PI, and for quality (PI3) a target for some quality aspect was also coded as a PI. However, a policy intention without any quantification was not coded as a PI. Also, the intention to specify a PI (but not actually quantifying it) was not registered as a PI.

It is often difficult to distinguish between some of the categorizations, most notably the verbal conclusions. However, it is important to include the verbal conclusions in order to also measure qualitative use of performance measurement in total and not only quantitative performance measurement. So, when the coders were in doubt as to which of the categories a verbal conclusion belonged to, the coders were instructed in the guidelines that the most important issue was that a qualified opinion was made and that the item was registered only once. We judged that it was better that an item was registered in a wrong subcategory than to leave out an item. It should be noted that the coding problem only arose within the subcategories and not between the main categories of verbal conclusions and PIs. However, when we analyzed and compared the data, we used aggregated data on verbal conclusions precisely because of these problems of consistency. The potential categorization problems,

Table 3

Mean number of verbal conclusions and performance indicators (PIs) in Dutch budgets and Norwegian annual reports of three size categories of municipalities in the years 1993, 1996, and 1999

Municipal inhabitants	N	Verbal conclusions			Performance indicators			Sum performance measurement		
		1993	1996	1999	1993	1996	1999	1993	1996	1999
The Netherlands										
100,000–200,000 <sup>a</sup>	3	104	82	104	650	718	636	754	800	740
50,000–99,999 <sup>b</sup>	3	46	48	81	32	46	161	78	94	242
20,000–49,999 <sup>c</sup>	3	50	87	86	9	250	274	59	337	360
Mean	9	66.7	72.3	90.3	230.3	337.7	357	297	410	447.3
Norway										
100,000–200,000 <sup>d</sup>	3	—	113	76	—	94	64	—	207	141
50,000–99,999 <sup>e</sup>	3	—	121	61	—	29	22	—	150	83
20,000–49,999 <sup>f</sup>	3	—	78	88	—	20	12	—	98	100
Mean	9	—	104.0	75.0	—	47.7	32.7	—	151.7	108.0

## Notes:

<sup>a</sup> Tilburg, Groningen, Almere

<sup>b</sup> Leeuwarden, Hengelo (O), Smallingerland

<sup>c</sup> Stadskanaal, Geldermalsen, Raalte

<sup>d</sup> Bærum, Stavanger, Trondheim

<sup>e</sup> Fredrikstad, Kristiansand, Tromsø

<sup>f</sup> Arendal, Hamar, Skien

therefore, did not matter after the data had been aggregated from the lowest levels of categorizations to the level of analysis.

The next section documents the comparison between the two countries, and analyzes the data according to the theoretical framework of the third section.

### Development of performance management and reporting, 1993–1999

The analysis shows how the performance information in the budget documents and annual reports has developed during the subsequent years, and is discussed in relation to the hypotheses. All nine municipalities in both countries have been analyzed: for the Netherlands in the years 1993, 1996, and 1999, and for Norway in the years 1996 and 1999.

Table 3 documents the use of performance measurement over time decomposed into verbal conclusions and PIs. First, Table 3 shows that performance measurement, and especially the number of PIs, was much larger in the Dutch budgets than in the Norwegian annual reports. Second, Table 3 shows an opposite development in the two countries regarding reporting practices over time. As we move from 1993 via 1996 to 1999, we see that the number of PIs was increasing in the Netherlands, whereas Norway showed a decrease in this number. The decrease in Norway may have several explanations. One explanation is due to intercoder reliability. As there were different coders for the 1996 and 1999 data, some differences may exist in coding practices. However, other explanations, especially related to experience with performance management and strategic use of information, are also likely. These are discussed further below.

Table 4  
Budget types in the Dutch municipalities in the years 1993, 1996, and 1999

Municipal inhabitants	N	Types of budgets		
		1993	1996	1999
100,000–200,000	3	I (2), I/P (0), P (1)	I (1), I/P (0), P (2)	I (0), I/P (0), P (3)
50,000–99,999	3	I (2), I/P (1), P (0)	I (1), I/P (2), P (0)	I (0), I/P (2), P (1)
20,000–49,999	3	I (3), I/P (0), P (0)	I (1), I/P (0), P (2)	I (0), I/P (1), P (2)
Mean	9	I (7), I/P (1), P (1)	I (3), I/P (2), P (4)	I (0), I/P (3), P (6)

Notes:

I = an input budget, indicating that PIs are not available or are only available for less than 25% of the products

I/P = an intermediate budget of the input/performance type, meaning that PIs are available for 25% to 75% of the products

P = a performance budget, indicating that PIs are available for more than 75% of the products

For each size group of municipalities as well as for the total number of municipalities, the frequencies of the three budget types are provided in brackets.

Given that municipal size is considered to be a proxy for complexity and thus uncertainty, a rise in municipal size is expected to coincide with a more intensive use of performance measurement. This expectation is based on our theoretical framework: irrespective of ambiguity, a growing uncertainty makes performance-based management more likely (this relates to a switch from either box I to box II or box III to box IV in Table 2).

Table 3 shows that performance information was most extensive in the largest municipalities, but it also indicates that the smallest municipalities used more PIs than the medium-sized municipalities. Consequently, these observations do not corroborate our theoretical framework. However, if we include decentralization as a possible response to complexity and uncertainty, our findings do support the hypotheses to some extent. On one hand, small municipalities may use more PIs than medium-sized municipalities, because the latter primarily respond to complexity through decentralization. However, large municipalities use more PIs than medium-sized municipalities because both categories rely on decentralization as a response to complexity, but large municipalities will need an additional response in the form of extra PIs to cope with it. Irrespective of these interpretations, it has to be emphasized that organizational size is a controversial proxy for uncertainty.

Table 4 documents the budget types in use in the Dutch municipalities. Whereas performance measurement was only to some extent developed in two of the nine Dutch municipalities in 1993, all municipalities in the Netherlands had a performance budget to some extent in 1999. The year 1996 shows an intermediate position in this respect. These findings indicate that performance measurement was only recently introduced in practice. However, just as in Norway, the average number of PIs per municipality may have decreased in the course of time. An indication for this expectation can be derived from a combined analysis of Tables 3 and 4. If the average number of PIs is related to those municipalities that actually introduced a performance budget, we observe a decline in the average number of PIs of Dutch municipalities having a performance budget when we move from 1993 via 1996 to 1999.

Table 5 shows the average number of PIs for each category of PIs in the year 1999.

Table 5

The average number of performance indicators (PIs) for each of the types of PIs in the 1999 budget and annual reports of the municipalities

Municipal inhabitants	N	P11	P12	P13	P14	P15	P16	P17	Total
The Netherlands									
100,000–200,000	3	10	9	57	54	460	44	2	636
50,000–99,999	3	2	0	7	11	132	5	4	161
20,000–49,999	3	3	10	30	68	156	5	2	274
Mean	9	5	6	31	44	250	18	3	357
Norway									
100,000–200,000	3	8	3	16	17	14	0	6	64
50,000–99,999	3	6	0	1	4	9	1	1	22
20,000–49,999	3	3	1	1	2	4	0	0	12
Mean	9	6	3	6	8	9	0	2	33

Notes:

P11: capacity utilization

P12: partial productivity ratio

P13: index of standard or quality

P14: average costs

P15: distribution ratio

P16: financing ratio (full cost ratio)

P17: coverage of needs ratio

Comparable results for the previous years are not reported because in these years performance budgeting was limited in the Dutch municipalities, as can be derived from Table 4. Table 5 indicates that both in the Netherlands and in Norway the distribution ratio (PI5), followed by the average cost indicator (PI4), turned out to be the most important PI in use. In the Netherlands, the distribution ratio even counted for more than the sum of all the other six types of PIs. This observation holds irrespective of the municipal size.

In Table 6 the average number of PIs for each of the policy fields in 1999 is shown. Note that in the Netherlands the fire brigade was included in policy field 1, but it was included in policy field 6 in Norway. This table indicates that in the Netherlands in two policy fields, health care and social services (policy field 3) and culture and religion (policy field 5), the relative number of PIs is above average, whereas in all other policy fields this number is below average. These differences might be explained by the fact that the more heterogeneous a policy field, the more PIs are used to cover such a policy field. We will more closely analyze these differences below. Some diverging patterns occur in the various municipal size categories. In the large and small municipalities, policy field 1 (general administration) also had a number of PIs above average, and in the medium-sized municipalities this also was true for policy field 2 (kindergartens and primary education) and policy field 4 (housing, economic, and environmental affairs). In Norway, policy field 2 (kindergartens and primary education) followed by policy field 3 (health care and social services) had the largest numbers of PIs.

A more thorough analysis of the PIs between different policy fields might be interesting for studying the empirical support of the conventional wisdom on organizational control.

Table 6  
The average number of performance indicators (PIs) for each of the policy fields in the 1999 budget and annual reports of the municipalities

Municipal inhabitants	N	Policy field 1	Policy field 2	Policy field 3	Policy field 4	Policy field 5	Policy field 6	Policy field 7	Total
The Netherlands									
100,000–200,000	3	105	31	190	70	130	46	64	636
50,000–99,999	3	9	33	43	28	30	13	6	161
20,000–49,999	3	54	28	60	37	67	15	13	274
Mean	9	56	30	98	45	76	25	28	357
Norway									
100,000–200,000	3	0	17	21	4	6	16	0	64
50,000–99,999	3	1	9	7	0	3	2	0	22
20,000–49,999	3	1	6	0	1	2	2	0	12
Mean	9	1	11	9	2	4	7	0	33

## Notes:

Policy field 1: general municipal administration

Policy field 2: kindergartens and education

Policy field 3: health care and social services

Policy field 4: housing, development of commerce and environmental affairs

Policy field 5: culture and religion

Policy field 6: infrastructure services

Policy field 7: roads and transportation

Because the relative size measured as resources used and number of services in the policy fields differ, we have to look for a common denominator to make policy fields comparable. In the Netherlands, the number of verbal conclusions generally coincides with the number of products. Therefore, different policy fields can be made comparable by dividing the number of PIs by the number of verbal conclusions in the policy field. In Norway, the number of PIs were divided by the assumed common number of main services in each of the two policy fields. This resulted in the average number of PIs per product that can be compared between the two countries. In Table 7, such calculations are made for two policy fields, that is, culture and religion (policy field 5) and roads and transportation (policy field 7). We chose these two policy fields because we expected the first one to be relatively heterogeneous and difficult to quantify, whereas the second one is relatively homogeneous and easier to quantify. Thus, they differ in the extent to which ambiguity is existent. However, they also differ with respect to uncertainty because roads and transportation is characterized by low uncertainty and religion and culture by high uncertainty. In this case, the theoretical framework prospects that performance measurement is only optional in the case of the policy field of roads and transportation, whereas it is likely (but used for symbolic reasons) in the case of the policy field of religion and culture (this relates to the transition from box I to box IV in Table 2). Consequently, we expected to find a relatively high number of PIs per product in the case of religion and culture, whereas the opposite would hold true for roads and transportation.

Table 7 shows the results of our analysis, which corroborates our theoretical framework: in both countries eight of nine cases are in accordance with our hypotheses. Thus, apparently, the conventional wisdom on symbolic, decoupled use could seem to have been supported. However, we cannot, based on our data, rule that the reported information has been used for

Table 7

Average number of PIs per product in two policy fields in the 1999 budget and annual reports of the municipalities

Municipalities	Policy field 7: Roads and transportation	Policy field 5: Culture and religion
The Netherlands		
Tilburg	180/17 = 10.6	364/21 = 17.0
Groningen	2/5 = 0.4	17/10 = 1.7
Almere	11/1 = 11.0	8/8 = 1.0
Leeuwarden	6/5 = 1.2	22/10 = 2.2
Hengelo (O)	0/5 = 0.0	9/6 = 1.5
Smallingerland	18/8 = 2.3	59/13 = 4.5
Stadskanaal	18/6 = 3.0	127/25 = 5.1
Raalte	9/5 = 1.8	38/20 = 1.9
Geldermalsen	12/8 = 1.5	36/10 = 3.6
Norway		
Bærum	1/1 = 1.0	10/2 = 5.0
Stavanger	10/1 = 10.0	16/2 = 8.0
Trondheim	7/1 = 7.0	17/2 = 8.5
Fredrikstad	2/1 = 2.0	18/2 = 9.0
Kristiansand	2/1 = 2.0	6/2 = 3.0
Tromsø	0/1 = 0.0	2/2 = 1.0
Arendal	0/1 = 0.0	3/2 = 1.5
Hamar	1/1 = 1.0	5/2 = 2.5
Skien	0/1 = 0.0	3/2 = 1.5.

symbolic purposes only. We think three alternative explanations to the decoupling proposition regarding use of performance management may explain the data in Table 7 better than decoupling only. First, the more ambiguity, the more performance management as an output control could be used to reduce or settle ambiguity in the longer run by organizational learning or negotiations. The second, alternative explanation is based on the reflection that the more ambiguous a policy field is, the more difficult it will be to find a small number of PIs to characterize this policy field. The third alternative explanation is that the more ambiguity, the more potential information could have in political, strategic use (Feldman & March, 1981). Thus, performance management could be extensively used for political control in contingencies of ambiguity.

## Discussion and Conclusions

We will now discuss whether the aforementioned changes in political and managerial control of Dutch and Norwegian municipalities can be explained by factors which have been raised in the international literature on public sector reforms, according to the theoretical framework of our third section. The following factors will be addressed: financial stress, opportunity for change, and the organizational contingency factors of uncertainty and ambiguity.

Van Helden (2000) tried to test the financial stress hypothesis on a microlevel by investigating eight Dutch medium-sized municipalities. The financial stress hypothesis was



operationalized by assuming a negative relationship between the financial position of a municipality and the existence of businesslike planning and control instruments. This examination showed that there was no evidence for the existence of this relationship. However, a conclusive judgment about the financial stress hypothesis could not be made due to the fact that nontechnical aspects of NPM were not taken into account, and also because of an (on average) upward bias in the financial position of the municipalities in the empirical investigation.

Epistemic communities as consultants (Laughlin & Pallot, 1998) have played a role in the diffusion of NPM ideas in the Netherlands, but their influence—at least in the start up stage of these developments—should not be exaggerated. As far as public choice ideas are concerned, they evidently played some part in governmental reforms: see, for example, van Nispen and Noordhoek (1996). The large-scale cities in the Netherlands relatively autonomously developed the new instruments to organize and control their organizations. A small consultancy firm without private sector background was responsible for the development of the PMI project. This firm's consultants had previously been progressive civil servants in charge of finance and organization. Most of them had personal experience in introducing new management tools in their municipalities. Rather than academic consultants, they spoke the language of people in local government and were trusted because of their engagement and experience (van Helden, 1998). So, the newly implemented management tools in the Netherlands were not considerably influenced by the ideas from internationally oriented consultancy firms (Pollitt & Bouckaert, 2000), although these firms might be influential later on.

In Norway, there was some fiscal stress after the fall of crude oil prices in 1986 and 1999. However, due to revenues from the petroleum sector, Norway has been a relatively rich country since the 1970s. Even though governmental control over local government is strong, which provides an opportunity for change, there is also widespread decentralization. Thus, there is discretion for individual municipalities, and change as public sector reforms tend to be gradual and consensus-based. Large-sized municipalities were pioneers in developing performance measurement. Later on, the government and smaller-sized municipalities followed. Private accounting firms as an epistemic community were relatively unimportant because of the role academic institutions and organizations of municipalities played in the development and diffusion of the new systems.

This paper shows that NPM developments in local government show several similar patterns in the Netherlands and Norway. There has been an increase in performance management in both countries. There is high local variation in performance management reporting practices both within local government in each country as well as between the two countries. These patterns could both be congruent with public sector decentralization reforms. Financial stress as a motive for adoption of NPM tools has only been moderately influential. Large municipalities often acted as pioneers in developing new planning and control systems, including the introduction of PIs. Epistemic communities in the form of international business-oriented consulting firms do not seem to have had much influence, at least in the start up stage of these developments. Nationwide municipal associations and academic institutions probably played a more important role in this respect. Currently, a large majority of municipalities in both the Netherlands and in Norway have adopted these systems to some extent. However, change patterns in both countries were relatively slow and gradual.

Reaching consensus in the adoption of new ways of governance in local government seems to have been an important feature of the so-called Nordic change process, which is also appropriate for the Netherlands. This may be evident for the Nordic, consensus-seeking model as giving opportunity for change, especially as NPM reforms often are large, complex, and enduring reforms. Last, but most important for management control theory, is that under contingencies of both uncertainty and ambiguity other explanations for management control than symbolism and decoupling might be more convincing.

An interesting feature is that the amount of performance reporting showed a decline from 1996 to 1999 in the larger Norwegian municipalities as well as in the largest Dutch municipalities. Because our data do not explain this pattern, we have delved a little into different explanations for this pattern. One obvious explanation is that performance management was a fad that has reached its peak in popularity and is now decreasing. This explanation could also be congruent with the decoupling proposition in sociological new institutionalism that states that some structures could be used externally to symbolize rationality but are only loosely coupled to internal structures in use. When certain structures, as performance measurement, eventually no longer provide legitimacy with major stakeholders, such structures may be replaced by new structures that could provide more credible symbolic functions. On the other hand, it is imaginable that municipalities, which now are becoming experienced with performance-based systems, use performance management systems not less decoupled and for symbolic reasons but more for strategic and political reasons. Several of the larger municipalities included in this study, both from the Netherlands and from Norway, now have had experience with performance measurement and reporting since the mid 1980s. In particular, the larger municipalities may have learned that reporting many PIs may not be conducive to performance measurement unless these measurements *de facto* are used in analyses. Therefore, these municipalities may have changed reporting practices from reporting many items to a practice where only selected issues of better quality (and hence fewer PIs and verbal conclusions) are reported. The quantitative decrease in reporting performance measurements may not necessarily be evidence for less qualitative or strategic use of performance management, rather than the contrary. Thus, what might at first glance look like a decline in the use of performance management systems as judged by the sheer quantity of reported performance measurement may in fact be more and more rational use of information.

Due to organizational learning, the municipalities may now change their reporting practices over time from reporting many items to reporting more analysis but fewer items. This could be due to several factors. First, the reported information may be of a higher quality than before. Second, the municipalities may only report that which serves their strategic interests. Third, however, we cannot rule out the explanation that some municipalities may resist increased central government control as part of the overall decentralization reform by reducing the municipal performance reporting. This points to the need for future studies on strategic use of information and intra-, inter- and extragovernmental competition (Breton, 1996) rather than only assuming that performance-based public management systems are used symbolically or that performance measurement is a trend or fashion that merely has peaked and now declines.

Our study has only encompassed the Netherlands and Norway. Moreover, the cases we

have analyzed have, due to availability of data, been deliberately chosen. Thus, our findings are representative neither for the Netherlands nor for Norway. However, the contrasted group design we have employed in this study has achieved construct validity regarding the concepts we wanted to study, in particular the development of performance-based management models in NPM reforms. The influence of the governmental structure and contingency factors—in the sense of the degree of centralization or decentralization, uncertainty and ambiguity—is diffuse and calls for further development and future studies.

The study seems to give considerable corroboration to explanations on the dynamics of NPM reforms provided by earlier research as Hood (1991, 1995) and Pollitt and Bouckaert (2000). In particular, the notions of motive for change, opportunity for change, learning by reducing uncertainty and addressing ambiguity, and—at least for Norway—the increased presence of central government control permeating decentralization reforms, seem to be useful in explaining traits of NPM reforms.

Future research on performance-based public management models should develop along two paths. First, comparisons should include more than two countries and preferably also encompass centralized countries. Second, more studies on how performance-based management systems are actually used in public sector reforms seem warranted.

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