

Public Sector Organisations' Use of Benchmarking Information for Performance Improvement Purposes

Theoretical Analysis and Case Studies in Dutch Water Boards

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Abstract

Recently, public sector organisations have introduced various private sector management styles and techniques. One of the practices that is frequently adopted is the use of benchmarking as a management tool to improve performance. This paper focuses on the extent to which public sector organisations actually use the resulting benchmarking information to develop and implement performance improvement actions. It distinguishes various mechanisms through which specific public sector characteristics may stimulate or hinder the use of benchmarking information. The applicability of these mechanisms will, however, depend on the specific circumstances. The paper illustrates this through four case studies of Dutch water boards. A subsequent cross-case analysis reveals that the question of whether a particular mechanism influences an organisation's use of benchmarking information may depend on: stakeholders' involvement in this organisation; the organisation's willingness to imitate others; its identification with sector-wide responsibilities; the responsibility that it assumes for its current performance; and the strength of its managers.

Keywords: benchmarking, public sector, new public management, case research

1 Introduction

Recently, public sector organisations have come under pressure to increase their efficiency and effectiveness. On the one hand they are required to reduce their demands on taxpayers, and on the other hand they are expected to maintain or improve the volume and quality of the services supplied to the public (Brignall and Modell, 2000, p. 281). To achieve this, they have introduced various private sector management styles and techniques, ranging from explicit performance measures and output controls to hands-on management and flexible reward systems (Hood, 1991, 1995). It is widely acknowledged, however, that public and private sector organisations differ in various important respects (Nutt and Backoff, 1993; Rainey, 1989; Rainey et al., 1976). This raises the question of whether the differences between the two sectors act as barriers to the transfer of management practices from the private to the public sector (Boyne, 2002). This paper focuses on one of the private sector practices that gained popularity in the public sector recently: namely, the use of benchmarking as a management tool to improve performance. It examines whether it is likely that the resulting benchmarking information is used in the public sector, given the specific characteristics of this sector.

Based on the differences that exist between public and private sector organisations, we might expect that public sector benchmarking is different from private sector benchmarking. So far, however, our knowledge of the relationships between sector characteristics and the design and use of benchmarking is limited. Despite ‘the emerging literature’ on public sector benchmarking (see also: Dorsch and Yasin, 1998), Bowerman et al. (2002, p. 430) express concern about ‘the lack of understanding of the real nature of benchmarking in the [public] sector’. Based on extensive case and survey research, they argue that public sector benchmarking is different from private sector benchmarking in three respects. To be specific, they assert that – contrary to its private sector counterpart – public sector benchmarking may aim at an acceptable or average performance level rather than ‘best practice’, is often not developed voluntarily, and generates information that is often disclosed outside the organisation. Given these differences, Bowerman et al. (2002, pp. 434-435) question whether ‘[t]he promise that benchmarking in the public sector will lead to enhanced organisational efficiency and effectiveness’ can be fulfilled.

The present paper takes the view that the differences between public and private sector benchmarking are the result of between-sector differences in organisational characteristics. The paper investigates the relationships between specific characteristics of public sector organisations and their use of benchmarking information for performance improvement purposes. When investigating this topic, it recognises that there is no stereotypical public sector benchmarking project. That is, variations can be expected, not only between different benchmarking projects, but also between different parts of the public sector. The first part of the paper ignores these complexities. It develops a theoretical framework that might be useful – to a greater or lesser extent – in investigating any public sector benchmarking project. The applicability of particular elements of the framework will, however, depend on the specific circumstances. The paper illustrates the applicability in a specific setting through four case studies of Dutch water boards. A subsequent cross-case analysis improves our understanding of the circumstances that influence the applicability of certain elements of the theoretical framework. In other words, the ultimate objective of this paper is to uncover the characteristics of public sector organisations that may affect those organisations’ use of benchmarking information for performance improvement purposes, to

describe the mechanisms through which these characteristics function, and to explore under which circumstances certain mechanisms can or cannot be expected.

The remainder of this paper is organised in five sections. Based on a literature review, section 2 develops the theoretical framework. This framework was applied to a benchmarking project that was carried out by Dutch water boards. For this purpose, four case studies were conducted. Section 3 describes the design of these case studies. Next, section 4 illustrates the framework using results from the case studies. A further discussion of the empirical results takes place in section 5, which comprises a cross-case analysis. Finally, section 6 presents and discusses the conclusions.

2 Theoretical framework

The term 'benchmarking' is often used to describe a range of organisational comparison processes. This paper uses a narrower interpretation of the term. Therefore, subsection 2.1 defines 'benchmarking' as it is used in this paper. Subsequently, subsection 2.2 discusses the public sector characteristics that may influence the use of benchmarking information.

2.1 Forms of benchmarking

In both the public and the private sector, various forms of benchmarking have been conducted for many years (Bowerman and Ball, 2000; Elnathan et al., 1996; Miller et al., 1992, chapter 2). Examples are data collected from member organisations by industry associations, and annual reviews of key statistics published by associations that focus on specific organisational functions. More recently, however, benchmarking has become a popular management tool to identify performance gaps and to improve performance. Using an overview that was developed by Spendolini (1992, pp. 9-10), this paper defines this form of benchmarking as: *A continuous, systematic process for measuring, comparing, evaluating and understanding the products, services, functions and work processes of organisations (that are recognized as representing 'best practices')*² for the purpose of organisational improvement. So a central characteristic of this form of benchmarking is that it aims at improving performance.

The above-indicated form of benchmarking was popularised in the private sector, but it is increasingly promoted in the public sector as well (Bowerman et al., 2002).³ Nowadays, many public sector organisations – ranging from central government departments and local government organisations to police forces and hospitals – are engaged in benchmarking projects that aim explicitly at performance improvement (see, for instance: Bowerman and Ball, 2000; Bowerman et al., 2001; Dorsch and Yasin, 1998; Groot et al., 2004; Northcott and Llewellyn, 2003). However, this is not to say that performance improvement is the sole objective of these projects. Other objectives may include: meeting external requirements to provide comparative data, demonstrating or increasing accountability to the public for the use of resources, justifying or defending existing performance, and proving that the organisation compares well against alternative sector providers (Bowerman and Ball, 2000). These objectives may act as a barrier to the use of benchmarking as a management tool for performance improvement (Bowerman et al., 2000, 2001, 2002). In other words, although this paper concentrates on public sector benchmarking projects that have performance improvement as (one of) their main objective(s), it must recognise that the attempts

² Although some authors (e.g. Walgenbach and Hegele, 2001, pp. 124-126) take the view that the identification of 'best practice' is the basic principle of benchmarking, Bowerman et al. (2002, pp. 433-434) question the significance of this principle in a public sector context.

³ Bowerman et al. (2002) notice that there is evidence of this form of benchmarking being used in the public sector before it was popularised in the private sector.

made to attain this objective might be influenced by other objectives of these benchmarking projects.

2.2 Characteristics that influence the use of benchmarking information

This paper defines the use of benchmarking information as the degree to which organisations have developed and implemented action plans to improve performance in response to benchmarking results. Although many organisations – including public sector organisations – are engaged in benchmarking projects nowadays, this does not imply that they actually use the resulting benchmarking information to improve their performance. In this respect, several authors (e.g. Ammons, 1999; Elnathan et al., 1996; Fedor et al., 1996) stress the importance of a ‘proper mentality’ or culture. Such a culture would comprise a recognition that ones own organisation is probably not the best in all aspects of operations, an eagerness to learn from other organisations, an openness in exchanging information, a willingness to adopt or adapt ideas developed elsewhere, and a resistance to tendencies to defend ones own (underperforming) operations. These conditions for the use of benchmarking information apply to organisations in general; i.e. both public and private sector organisations. Public sector organisations, however, differ in various respects from private sector organisations (Boyne, 2002; Nutt, 2000; Nutt and Backoff, 1993; Rainey, 1989; Rainey et al., 1976).⁴ Rainey et al. (1976), for instance, distinguish twenty-five differences between public and private sector organisations. This paper argues that six (combinations) of these differences are of particular interest when studying the use of benchmarking information in public sector organisations. The remainder of this section aims at uncovering the mechanisms through which these characteristics may influence the use of benchmarking information.

Market exposure

Individuals often cannot avoid financing the activities of public sector organisations and consuming these organisations’ outputs. As a result, public sector organisations are to a lesser extent exposed to economic markets as sources of revenues and information. As sources of revenues, markets enforce relatively automatic penalties and rewards. Consequently, public sector organisations are less subject to automatic incentives for cost reduction, operating efficiency and effective performance (Rainey et al., 1976). This might reduce their motivation to develop and implement action plans in response to benchmarking results. Van Helden and Tillema (2005), for instance, argue that public sector organisations have less need to conform to other, better performing, organisations, because non-conformance does not result in a direct threat to the organisation’s survival. The same mechanism might also explain why public sector organisations often strive, through benchmarking, to be good enough rather than best (cf. Bowerman et al., 2002). Sometimes, excellent performance is actually regarded as undesirable, because an excellent financial performance might indicate that an organisation is not doing the things it should do, whereas an excellent operating performance might indicate that an organisation is wasting money by having a quality level that is much higher than is required (Northcott and Llewellyn, 2003, pp. 58-59; see also: Llewellyn and Northcott, 2005). Nevertheless, it should be noted that, for example, oversight bodies can raise considerations of efficiency and effectiveness (Nutt and Backoff, 1993; see also: Northcott and Llewellyn, 2003, p. 57; see: ‘political influences’).

⁴ For a critical evaluation of the empirical evidence of the differences between public and private sector organisations, see Boyne (2002).

Public sector organisations lack markets also as sources of information. Economic markets provide relatively clear, quantitative demand indicators, goals and performance measures – i.e. prices, sales and profits (Rainey et al., 1976). Their absence implies that public sector organisations do not have strong market signals about success or failure (Nutt and Backoff, 1993). In such a situation, benchmarking information can be seen as an alternative to market signals (see: Van Helden and Tillema, 2005, p. 339). That is, if public sector organisations have not formed – due the absence of clear market signals – an impression of their relative performance (i.e. their performance compared to that of similar organisations), benchmarking information might provide a first indication that they are not ‘competitive’ in certain areas. Organisations may then use benchmarking information to develop and implement action plans in order to close the performance gaps revealed by the benchmarking.

In one respect, public sector organisations may actually benefit from being exposed to economic markets only to limited degree. More precisely, the sharing of information between organisations – which is to a varying degree part of a benchmarking process – is often seen as being problematic, especially when it regards organisations within the same industry (Camp, 1995, p. 81; Drew, 1997, p. 431). Matters of confidentiality, sustaining competitive advantage and antitrust laws may act as barriers to a within-industry information exchange. This could complicate not only the process of finding benchmarking partners and gathering benchmarking data (Bowerman et al., 2002, p. 445), but also the process of investigating which business processes underlie superior benchmarking scores. In the absence of true market competition, the above considerations are of only minor importance. As a result, public sector organisations may experience less difficulties in finding the means to close performance gaps.

Institutional constraints

Public sector organisations are confronted, to a much greater degree than private sector organisations, with legal mandates, other formal arrangements and traditions that pose constraints on their purposes, methods, and domains of operation (Nutt and Backoff, 1993; Rainey et al., 1976). That is, public sector organisations are often expected to provide a specific set of services to a particular type of customers who are located in a particular geographical area. With respect to benchmarking, this may imply that these organisations are less autonomous and less flexible when developing and implementing action plans. In other words, compared to private sector organisations, public sector organisations have a smaller set of alternative actions that they could implement in order to close performance gaps.

Political influences

In public sector organisations, the decision-making process is more complex due to a greater diversity and intensity of formal and informal influences from, for example, oversight bodies, governing bodies, individual politicians, the public opinion, and interest groups (Rainey et al., 1976). Each of these stakeholders places demands and constraints upon the organisations, and as a consequence these organisations are pushed and pulled in many directions at the same time (Boyne, 2002). In such a situation of multiple and diverse interests, compromises are needed to arrive at decisions that are acceptable to all stakeholders that are involved. This may also apply to decisions about the action plans that will be developed and implemented in response to benchmarking results. As a consequence, public sector organisations may need more time to take decisions about

the content of action plans, they may defer such decisions, and when they do take decisions these decisions may be less radical than those of private sector organisations. The influence of multiple and diverse interests also results in more complex objectives, which is discussed below (see: 'objectives').

Public scrutiny

Public sector organisations are subject to greater public scrutiny than private sector organisations. They are able to keep fewer secrets and are more subject to outside monitoring (Rainey et al., 1976). Because of such issues of openness, accountability and oversight, public sector organisations often (have to) communicate their benchmarking scores to a wider public (Bowerman et al., 2002, p. 434). Actually, disclosure is a direct consequence of some of the main objectives of many public sector benchmarking projects (see: section 2.1). One might argue that the disclosure of benchmarking scores can result in pressures being exerted by stakeholders for the development and implementation of action plans (Helden and Tillema, 2005; cf. Bowerman et al., 2002, p. 445). However, in a number of papers, Bowerman, Ball and others (Bowerman and Ball, 2000; Bowerman et al., 2001, 2002) question whether benchmarking can enhance organisational efficiency and effectiveness when the results of benchmarking projects are published. Under such circumstances, organisations may regard benchmarking as a tool to demonstrate good performance and not as a tool to improve performance. As a result, when analysing the benchmarking results, they do not look for inferior aspects of their business processes that require improvements; instead, they search for factors that can be used to explain why the organisation is not to blame for the inferior aspects of its performance. When such explanatory factors have been found, organisations may be less committed to using the benchmarking information to improve performance.

Objectives

Public sector organisations' mix of objectives is more complex in the sense that these objectives are multiple, diverse, and often conflicting due to the fact that they are influenced by a variety of stakeholders (Rainey et al., 1976). A consequence of such ambiguous objectives is that the outcomes of control processes depend on power structures, negotiation processes, the need for the distribution of scarce resources, particular interests and conflicting values (see: Hofstede, 1981, 'political and judgmental control'). Applied to the benchmarking process, which can be regarded as a type of control process, these aspects may affect the development, content and implementation of public sector organisations' action plans. More specifically, the outcome of decisions about these action plans may depend on the stakeholders that have a say in the decisions, their interests, and the problems and solutions that they are aware of. Together these elements influence the decisions that an organisation takes (and the decisions that it overlooks or deliberately escapes from).

Performance characteristics

In public sector organisations, the cycle of elections and political appointments may result in frequent changes in policy and in interruptions in the implementation of plans and projects. This – together with a weaker hierarchical authority, and a lack of incentives for successful innovations – explains why public sector organisations tend to be more cautious, less flexible, less innovative, and more short-sighted, as compared to private sector organisations (Boyne, 2002; Rainey et al., 1976). With respect to benchmarking, these characteristics may imply that – compared to their private

sector counter parts – public sector organisations are more likely to terminate the development or implementation of action plans, and to develop less radical action plans. It should be noted, however, that benchmarking might also be a solution to some of the problems faced by public sector organisations that seek to generate alternative means of meeting expectations of increased efficiency and effectiveness (cf. Davies, 1998; Nutt, 2000). These problems might include a lack of data describing emerging trends in service delivery, limited financial resources available to uncover alternatives, and a fear for accusations that public money is being wasted. Benchmarking can then be seen as a time and cost-saving means of leaning and innovating. In other words, benchmarking is an alternative to research and development activities and may be used by public sector organisations to introduce innovations. Still, the innovations discovered through benchmarking are generally imitative or incremental rather than radical in nature (cf. Drew, 1997, p. 429).

The present section discussed various mechanisms through which certain characteristics of public sector organisations might influence these organisations' use of benchmarking information. However, the applicability of these mechanisms will depend on the specific circumstances, which include the characteristics of a specific benchmarking project as well as of the part of the public sector that undertakes this project. In order to improve our understanding of the circumstances in which particular mechanisms can or cannot be expected, section 4 will investigate public sector benchmarking in a specific empirical context. But first section 3 will provide an overview of the design of the empirical research.

3 Research method

The empirical research focuses on a benchmarking project that was conducted by Dutch water boards, and which had improvement of the water boards' performances as one of its main objectives. According to Bozeman (1987), no organisation is wholly public or private. In many respects, however, the extent of publicness of the Dutch water boards may be regarded as rather high. That is, the water boards have a formal legal status as governmental organisations. They serve the public interest, and are controlled predominantly by political forces rather than market forces. There is no market for most of water boards' services, and the majority of these services can be classified as public goods, implying that people cannot be excluded from consuming these services when they fail to pay for them. For this reason, the water boards are funded largely by taxation. Given the above characteristics, we may regard the Dutch water boards' benchmarking project as an example of a public sector benchmarking project that aims at improving performance. The empirical research revealed, however, that in some respects the water boards are somewhat different from the stereotypical public sector organisation. These differences led to interesting insights into the applicability of various mechanisms described in the theoretical framework.

The water boards' benchmarking project was investigated using case research. The selection of water boards for this research was based primarily on the results from a mail questionnaire that gathered information about the action plans that the water boards had developed and implemented as a result of the benchmarking project. Based on this information, two active and two passive water boards were selected. The active water boards both claimed that they had developed and implemented many action plans in response to the benchmarking results. During the case research, however, it turned out that there was a notable difference between these water boards. This difference concerned the reasons that they had for using the benchmarking information. The first

water board (labelled 'the ambitious water board') had excellent benchmarking scores. The attitude within this water board can be described as: 'our performance is already good, but improvements are always possible'. The water board aimed at an overall top five position in future benchmarking studies. For this reason, it used the benchmarking results explicitly to improve its performance. This approach resulted in several action plans, and by the time of the case research all plans either were being implemented or had been implemented. The second water board ('the dissatisfied water board') had rather poor benchmarking scores. This came as a rather unpleasant surprise to the water board. It therefore took the benchmarking results fairly seriously in the sense that it made a survey of all recently proposed performance improvement actions, and applied pressure to ensure that those actions were all fully implemented. Nevertheless, the water board did not develop many *new* performance improvement actions in response to the benchmarking results, and at the time of the empirical research a considerable number of the proposed actions comprised only rough ideas about ways to improve performance. In that respect, the water board appeared to be less active than was expected based on the questionnaire.

For the passive water boards the gaps between their benchmarking scores and those of the best performing water boards were moderate. Based on the results from the mail questionnaire, both water boards did not seem to have used the benchmarking results to any great extent in developing action plans. The case research confirmed this: both water boards developed only one or two action plans in response to the benchmarking results, and by the time of the case research these plans were still in an early stage of development. The passive water boards differed from each other in the reasons that they gave for their passive attitude. The first water board ('the satisfied water board') pursues a low-cost strategy; i.e., a strategy to meet legal waste-water treatment standards at the lowest possible cost level. After the publication of the benchmarking results, this water board carefully analysed these results. Based on this analysis, it was decided that taking further improvement actions would be inconsistent with the water board's strategy. The second water board ('the resisting water board') ascribed its inactivity to practical issues, including a lack of time, the implementation of various other projects, and the water board's involvement in a merger. However, it also indicated that the rather disappointing benchmarking results, and the water board's late involvement in the benchmarking project, both played a role. These aspects gave rise to defensive mechanisms, which included criticising the benchmarking project, its measurement instrument and its results. This criticism appeared to be an important explanation for the limited impact that the benchmarking results had on the water board's internal operations.

Table 1 gives an overview of some important differences between the selected water boards. Due to these difference the case research allowed us to develop a broad understanding of the reasons that public sector organisations may have for using or not using benchmarking information.

Table 1 Selection of water boards.

Use of benchmarking information	
Extensive	Limited
<i>Ambitious water board:</i> benchmarking information was used because the water board aspires to a position among the best performing water boards.	<i>Satisfied water board:</i> further performance improvement actions based on the benchmarking results would have been inconsistent with the water board's low-cost strategy.
<i>Dissatisfied water board:</i> unexpectedly poor benchmarking results urged water board to use benchmarking information.	<i>Resisting water board:</i> benchmarking information was hardly used, not only because of practical issues, but also because of the water board's aversion towards the project.

The most important data source were semi-structured interviews. These interviews took place in October 2002, which was about 18 months after the results of the benchmarking project had been published. Important issues in the interviews were: the number, content, developmental stage, initiators and (expected) effects of the action plans that had been developed as a result of the project; the reasons for developing or not developing action plans; the attitude towards the benchmarking project; the attitude towards performance gaps; the strategy of the water boards; and the influence of stakeholders. The questions about the number, content and developmental stage of the action plans were used to 'measure' the extent to which the benchmarking information had been used. The other issues are closely related to the characteristics discussed in the theoretical framework. For instance, a water board's strategy provides insight into the extent to which the water board tries to balance multiple and diverse objectives (see section 2: 'objectives'), and the influence of stakeholders reflects the importance of reaching compromises ('political influences'), of outside monitoring ('public scrutiny'), and of power structures and negotiation processes ('objectives'). The persons interviewed in each water board comprised the chairperson, another member of the executive body, the secretary-director, the head of waste-water treatment, the controller, and the internal coordinator of the benchmarking project. The secretary-director of the satisfied water board was not interviewed, however, because this person was not involved in the benchmarking project. The interviews lasted – with a few exceptions⁵ – between 45 and 90 minutes each, and were recorded on tape. All interviews were summarised in interview reports, which were sent to the interviewees for approval. In addition to the interviews, document analysis, talks with persons within the water board sector, and group meetings, were used to collect and verify data.

4 Research results

This section presents the results from the empirical research into the benchmarking project carried out by the Dutch water boards. It starts with a subsection that provides some background information about the water board sector and this benchmarking project. The next subsection uses information from the case studies to illustrate the theoretical framework that was developed in section 2.

⁵ The exceptions include interviews of 20 and 120 minutes duration.

4.1 Background information

The Dutch system of water boards has a very long history. Some water boards (or their predecessors) were founded between the 12th and 14th centuries. Nowadays, the water boards are governmental authorities that are responsible for the water management in a given area (Unie van Waterschappen, 1999). Their main tasks are: water control (protection against flooding), water quantity management (managing the amount of water and ensuring that it is kept at the right level), water quality management (combating water pollution and improving the quality of the surface water), and management of waterways and roads. Some water boards are involved in each of these four tasks, others undertake only a selection.

Each water board has two governing bodies: a general council and an executive body (Unie van Waterschappen, 2003; www.waterschappen.nl). The general council is composed of representatives of groups with an interest in the work of the water board (e.g. residents, land and property owners, and industrial polluters). These members of the general council are elected every four years. The executive body is appointed by and from among the general council. Apart from these elected members of the governing bodies, every water board has a chairperson, who is appointed every six years by the Crown, and who is a member of the executive body. The governing bodies are supported by technical and administrative staff. The number of staff per water board varies from 100 to 900 people. The highest manager of a water board is the secretary-director.

This paper is concerned with the water-quality management task of the Dutch water boards, which is also called the waste-water treatment task. This task implies that waste water from households and businesses is first transported via the sewers to waste-water treatment plants and is subsequently purified in these plants. The 25 water boards that were involved in waste-water treatment in 1999 carried out a benchmarking project⁶. This waste-water treatment benchmarking project was the water boards' first sector-wide benchmarking project. The project, which was initiated by the Dutch Association of Water Boards, had two main objectives: demonstrating accountability to the water boards' stakeholders (including members of the governing bodies, citizens, businesses and municipal authorities), and finding ways to improve business processes (Arthur Andersen and Vertis, 2001). Apart from these explicitly stated objectives, which focus on the individual water board level, there was also a more implicit objective, which was important at the sector level. This objective was concerned with gaining legitimacy for the sector as a whole. Section 5 will discuss this objective in more detail (see: 'sector membership'). In this stage, it is important to note that in each of the four water boards included in the case research the majority of the interviewees stressed the importance of finding ways to improve performance⁷.

The Association of Water Boards appointed external consultants to develop the performance measurement instrument, and to collect and analyse the data (Arthur Andersen and Vertis, 2001). Together with representatives of some water boards, these consultants developed an adapted version of the balanced scorecard to use as a measurement instrument (see also: Kaplan and

⁶ The type of benchmarking that was used is commonly referred to as 'relative performance evaluation' (see Northcott and Llewellyn, 2003, p. 52). This type of benchmarking is external (i.e. involving comparisons between organisations), comparative (i.e. involving comparisons between direct competitors) and results-oriented (i.e. involving a comparison of outputs rather than processes).

⁷ Circa 75% of the interviewees that were asked to answer this question assert that in their view the internal objective of the benchmarking (improvement) is more important than the external objectives (accountability and legitimacy). The exceptions include three chairpersons who either attach more importance to the external objectives or regard both types of objectives equally important.

Norton, 1992, 1996). This version of the balanced scorecard comprised four perspectives: an operating perspective, a financial perspective, an environmental perspective, and an innovative perspective. Together the four perspectives included eleven key performance indicators and a large number of other performance indicators.⁸ The benchmarking results were published in a benchmarking report in March 2001.

4.2 Illustrations of theoretical framework

We will now investigate which of the mechanisms discussed in section 2 are applicable to the water boards' use of information from the waste-water treatment benchmarking project.

Market exposure

Section 2 argued that public sector organisations may be less motivated to use benchmarking information, because they are less subject to market incentives for performance improvements. This argument applied to the resisting water board. That is, although the benchmarking results suggested that its performance was not as good as expected, this water board decided not to act on these results. It argued that its performance in absolute terms is much more important than its performance compared to that of other organisations. For this reason, it did not see the need to conform its performance to that of 'better' performing water boards. Apparently, the rewards and penalties for (not) improving performance were too small to induce the water board to act on the benchmarking results. The other three water boards, however, did not confirm this argument. The ambitious and satisfied water boards, for example, did not question the importance of bridging the performance gaps that were revealed by the benchmarking project.

The dissatisfied water board too had a positive attitude towards using the benchmarking information. Nevertheless, similar to the resisting water board, it stressed that it did not explicitly aim to improve its future benchmarking scores; improvements in absolute performance were regarded as more important than improvements in relative performance. In contrast to the resisting water board, however, the dissatisfied water board indicated that it used information about its relative performance to judge the appropriateness of its performance targets in absolute terms. The waste-water treatment benchmarking project revealed to the dissatisfied water board that its performance was much lower than that of many other water boards. As a reaction, the water board speeded up the implementation of its planned performance improvement actions. In other words, the dissatisfied water board regarded its benchmarking scores as an indication that its 'competitive' position was rather weak, and this increased its sense of urgency about closing the gap between its targeted and actual performance. This confirms the argument in section 2 that public sector organisations may use benchmarking information as a substitute for market signals. Interestingly, the ambitious and satisfied water boards had very clear ideas of how their performances compared to that of other water boards before the benchmarking project was started. This indicates that public sector organisations may have other means than benchmarking to obtain information about their 'competitive' position.

Section 2 also suggested that public sector organisations' limited exposure to economic markets might help these organisations in consulting each other in order to gather information that can be used to close performance gaps. However, this argument is not confirmed by the waste-water

⁸ More information about the design of the measurement instrument can be found in Van Helden and Admiraal (2002).

treatment benchmarking project, as none of the four water boards that were investigated consulted water boards with better benchmarking scores. The ambitious water board, for example, was surprised that no other water board had visited it to learn about its business processes, which formed the basis for its excellent benchmarking results.

Institutional constraints

Based on section 2, we expected that, because of institutional constraints, public sector organisations may be less autonomous and less flexible when developing and implementing action plans. The satisfied water board provided an illustration of this argumentation. In this water board, there was a discussion of whether the organisation was allowed to continue undertaking certain activities that had had a positive impact on its performance in the financial perspective. More precisely, the water board was using excess capacity of its fermentation installations to generate electricity by processing liquid waste products from certain industries. This electricity was being used by the water board itself and was thereby reducing the amount of electricity that it had to buy from power and gas companies. A further increase in these waste-processing activities could be achieved by increasing the capacity of fermentation installations beyond the size that was needed for the waste-water treatment activities. This could potentially lead to a situation in which the water board sells electricity – and also heat that can be used for district heating – to power and gas companies. Proponents of this policy argued that such activities contribute not only to the water board's financial performance, but also to a healthier environment. However, some stakeholders cast doubts on the desirability of competing with for-profit organisations, and feared the risks that might be involved.

Political influences

Section 2 argued that, since their decision-making processes are influenced by various stakeholders, public sector organisations may need more time to take decisions on action plans, they may defer such decisions, and they may take less radical decisions. The empirical research, however, did not provide clear evidence that the involvement of stakeholders had slowed down or impeded the water boards' decision-making processes. In contrast, it turned out that most decisions on action plans were initiated by staff members, and that the influence of other stakeholders on the outcomes of these decisions was not substantial. The only groups of stakeholders that had a significant role were the governing bodies. In some water boards these bodies exerted pressure to develop and implement action plans, but their influence on the *content* of such plans was rather limited. In the other water boards, the role of the governing bodies was more passive in the sense that it was restricted to the formal approval of the plans that were proposed by the staff members.

Despite the limited direct influence of stakeholders, the empirical research showed that the four water boards undertook rather safe performance improvement actions; i.e., actions that implied improvements in their current way of operating. More radical actions, such as outsourcing activities or cooperating more closely with other water boards in building waste-water treatment plants, did not take place. This is consistent with our expectations. It was also evident that the water boards pay considerable attention to the various stakeholder interests when taking decisions. However, although the water boards' reluctance to take more radical plans may be due to a desire to gain acceptance and prevent criticism from stakeholders, it may also be due to inertia.

Public scrutiny

Because of such issues as openness, accountability and oversight, public sector organisations often (have to) communicate their benchmarking scores to a wider public. Also the results of the waste-water treatment benchmarking project were made public. Section 2 argued that under such circumstances public sector organisations may regard benchmarking as a means to defend rather than to improve performance. The resisting water board appeared to be most susceptible to the defensive mechanisms that may arise from the publication of benchmarking scores. In order to avoid negative reactions from its external stakeholders, this water board's first response to the benchmarking results was to organise a press conference, and give an explanation for its disappointing scores. Subsequently, the benchmarking results were mainly disregarded. This became clear when some of the people interviewed in the course of the case study clearly admitted that only the interviews had spurred them to dig up the benchmarking report. So, it appeared that once the water board had given an explanation for its benchmarking scores, it was no longer convinced of the need to use these results to improve performance. Nevertheless, it seemed as if the water board was not sure whether it would be given the freedom to ignore the benchmarking information. That is, to the water board it came as a surprise that external stakeholders – including the provincial authorities that are responsible for exercising supervision over the water board – hardly used the benchmarking results to exert pressure to improve performance. The resisting water board experienced only some pressure from the Association of Water Boards, which pressured the water boards to make improvements in areas in which the sector as a whole was underperforming.

The other three water boards did not show such obviously defensive behaviour. Especially, the ambitious water board's attitude towards the involvement of external stakeholders was entirely different from the resisting water board's. More precisely, this water board was dissatisfied that its external stakeholders, including the media, paid little attention to its benchmarking results. On the one hand, it was disappointed that the media did not give it the opportunity to communicate its excellent benchmarking results to a wider public. In the water board's view, the media are much more interested in negative incidents than in positive events. On the other hand, the ambitious water board felt disappointed that it had to initiate performance improvement actions without the stimulating effect of external stakeholder pressure. The dissatisfied water board confirmed the limited interest of external stakeholders and the media in the benchmarking results. This is rather surprising: notwithstanding this water board's poor benchmarking scores, external stakeholders did not call the water board to account for these scores. Apparently, in the water board sector stakeholder pressure, which – according to section 2 – may stimulate organisations to use benchmarking information, is limited.

Objectives

Public sector organisations often have ambiguous objectives. Based on this characteristic, we expected that the initiation, content and implementation of their action plans depend on power structures and negotiation processes. The dissatisfied water board supported this expectation. Within this water board's governing bodies, there was a disagreement about the relative importance of different aspects of performance. Some members argued that the water board should start with decisions on its waste-water treatment objectives (operating or environmental perspective) and then see what costs must be incurred and what levies must be imposed to attain these objectives; others were of the opinion that the water board should start with decisions on acceptable levels of costs and levies (financial perspective) and then see what level of waste-water treatment can be attained

given these financial constraints. As a result of this disagreement, several interviewees found it hard to rank the different aspects of the water board's performance according to their relative importance. Moreover, there was no general guideline that could be used to evaluate performance improvement actions. When discussing individual proposals for improvement, the interviewees often stressed that ultimately the governing bodies must decide whether the resulting improvements in operating and environmental performance outweigh the costs of implementing those proposals. The difficulty that the water board had with setting priorities implied that the water board found it hard to decide which action plans should be implemented first. According to the chair person, the water board was swayed by the issues of the day; and it paid only limited attention to its future position. All in all, the situation at the dissatisfied water board seemed to hinder the quick implementation of the proposed actions.

Also the empirical research at the resisting water board provided an illustrative example of the argumentation in section 2. That is, this argumentation may explain why the developmental stage of one of actions that this water board proposed as a response to the benchmarking results, namely the implementation of an auditing instrument for sustainability, was quite low. Especially the governing bodies, but also the Association of Water Boards, exerted pressure to implement such an instrument. It was seen as a means of informing the outside world about the numerous activities that the water board was undertaking to preserve the environment. The resisting water board's staff, however, strongly resisted the introduction of an auditing instrument. They argued that actions and environmentally friendly behaviour are much more important than the paper work that goes hand in hand with the implementation of an auditing instrument. Apparently, staff and governing bodies disagreed about the importance of planning and controlling environmental activities, and about the necessity to conform to developments in this area in the water board sector. The staff postponed the implementation of an auditing instrument by referring to practical issues such as their involvement in other projects and a merger. It seemed that the governing bodies were not so powerful that they could force the staff members to speed up the process. As a result, at the time of the interviews the water board had only a vague idea of implementing an auditing instrument.

The two remaining water boards did not provide any evidence that supports our arguments that public sector organisations may have difficulty in setting clear objectives, and that as a result the initiation, content and implementation of action plans may depend on power structures and negotiation processes. In contrast, the ambitious and satisfied water boards had very clear ideas about their main objectives. Moreover, among their stakeholders there did not seem to be any disagreement with respect to the relative importance of the different objectives. The ambitious and satisfied water boards aimed at, respectively, a position among the best performing water boards, and meeting legal waste-water treatment standards at the lowest possible costs. Both water boards used their objective as a guideline when taking decisions about performance improvement actions. Consequently, to these water boards it was quite clear how they should use the benchmarking results.

Performance characteristics

It was expected that changes in policy after elections can impede the further implementation of public sector organisations' action plans. However, this expectation could not be investigated for the water boards, due to the absence of elections between the publication of the benchmarking results and the data collection for the case studies. Furthermore, given the cycle of elections and

political appointments, it was also expected that public sector organisations will tend to develop less radical action plans in order to prevent a future termination of their implementation. Consistently, earlier parts of this paper (see: 'political influences') showed that the performance improvement actions that the water boards planned in reaction to the benchmarking results were somewhat save, and implied no radical changes to their current way of operating. However, there were no indications that a fear for policy changes after future elections played a role in explaining this outcome. The empirical research also did not find any support for the remaining element of the performance-characteristics section of the theoretical framework. That is, although the water boards that were investigated stressed the importance of benchmarking as a means to learn from other organisations, none of them explicitly referred to benchmarking as a time and cost-saving means of leaning and innovating. In contrast, the high cost of the benchmarking project was often brought up during the interviews. Together with our earlier observation that none of the four water boards had visited water boards with better benchmarking scores to learn about their business processes, this suggests that the water boards did not explicitly use the relatively cheap and safe innovation opportunities that can become available through benchmarking.

5 Cross-case analysis

At this point, it is useful to recapitulate our results so far. For that purpose, table 2 summarises the theoretical framework that was developed in section 2 as well as the empirical findings from the case studies. The left-hand column comprises all mechanisms through which public sector characteristics were expected, based on the literature, to affect the use of benchmarking information for performance improvement purposes. The middle column indicates whether a particular mechanism was expected to have a positive (+), negative (-) or indeterminate (+/-) influence on the degree to which benchmarking information is used. The right-hand columns reflect the extent to which the case studies support the theoretical framework. They use the following symbols:

- S** ('support'): a case study provided support for a mechanism;
- LS** ('limited support'): a case study's results are consistent with the outcomes that were expected based on the theoretical framework, but provide only weak support for the underlying argumentation;
- R** ('rejection'): a case study provided evidence that clearly contradicts a mechanism;
- NS** ('no support'): a case study neither provided support for a mechanism, nor did it provide evidence that contradicts this mechanism.

The mechanisms in table 2 are numbered to facilitate cross-referencing.

Table 2 Mechanisms that may influence the use of benchmarking information for performance improvement purposes.

Mechanism	Direction	Water board			
		Ambitious	Dissatisfied	Satisfied	Resisting
Market exposure					
1a. Less subject to market incentives for performance improvements: less incentives to use benchmarking information	-	R	R	R	S
1b. No clear market signals about success or failure: benchmarking information provides first indication of relative performance: incentive to use benchmarking information	+	R	S	R	R
1c. Lower barriers to sharing information: easier to collect information about business processes that underlie good benchmarking scores	+	R	R	R	R
Institutional constraints					
2. More constraints on purposes, methods and domains of operation: less autonomy and less flexibility in developing and implementing action plans	-	NS	NS	S	NS
Political influences					
3a. Stronger and more diverse influence of stakeholders: compromises must be reached: decisions on action plans need more time or are deferred	-	R	R	R	R
3b. Stronger and more diverse influence of stakeholders: compromises must be reached: action plans are less radical	-	LS	LS	LS	LS
Public scrutiny					
4a. Benchmarking scores are disclosed: stakeholders pressure organisation to improve: incentive to use benchmarking information	+	R	R	R	R
4b. Benchmarking scores are disclosed: tendency to defend scores: less incentives to use benchmarking information	-	R	R	R	S
Objectives					
5. Multiple, diverse and conflicting objectives: initiation, content and implementation of action plans depend on the stakeholders that are involved, their interests, relative power positions and visions	+/-	R	S	R	S
Performance characteristics					
6a. Cycle of elections and political appointments: frequent policy changes: development or implementation of action plans is terminated	-	†			
6b. Cycle of elections and political appointments: fear that implementation of action plans will be terminated after policy changes: action plans are less radical	-	NS	NS	NS	NS
6c. Problems faced when generating means to improve: benchmarking is suitable means of learning and innovating	+	R	R	R	R

† Mechanism 6a could not be investigated for the water boards.

Table 2 shows that the case research found support for six of the twelve mechanisms that were discussed in section 2. However, for four of these mechanisms it found not only evidence that they were supported by one or two water boards, but also evidence that they were rejected by the other water boards. Moreover, five mechanisms were not supported or even rejected by all case studies. In other words, many aspects of the water boards and their benchmarking project actually challenge the theoretical framework. In the following cross-case analysis we try to explain why certain elements of the theoretical framework were rejected for all (mechanisms 1c, 3a, 4a and 6c) or some (mechanisms 1a-b, 4b and 5) of the water boards that were included in the case research. In addition, we will pay attention to the mechanisms for which we found no or only limited support (mechanisms 3b and 6b) in all case studies.

Two factors are important in explaining why certain mechanisms do not apply to all four water boards: stakeholder involvement and willingness to imitate.

Stakeholder involvement

In contrast to what we expected (see: mechanism 4a), the four water boards did not experience much pressure from their (external) stakeholders to use the benchmarking results to improve performance. Moreover, none of them was confronted with delays in decision-making processes due to conflicts of interest between stakeholders (inconsistent with mechanism 3a). Furthermore, although the water boards developed less radical action plans (in accordance with mechanisms 3b and 6b), this was not ascribed to the direct influence of stakeholders, nor was it motivated by expected changes in the composition of governing bodies. These findings indicate that in the waste-water treatment sector stakeholder involvement – which can be defined as the degree to which various stakeholders are concerned with an organisation and try to influence its activities – is quite low. It appeared that external stakeholders and internal stakeholders other than staff (i.e. governing bodies and members of these bodies) have limited influence – and especially direct influence – on the water boards' waste-water treatment decisions. This is related to specific characteristics of water boards in general and waste-water treatment in particular.

Despite their often old age, the water boards as a form of government are less known to a wider public than the other forms; i.e., the central government, and the provincial and municipal authorities. Moreover, the general public is less familiar with the waste-water treatment task than with other tasks of the water boards. The case studies revealed that waste-water treatment attracts little attention from external stakeholders. This disinterest might be due to two factors. First, the taxes paid for waste-water treatment (i.e. the pollution levy) are relatively small compared to – for instance – the local taxes, and the charges for gas and electricity (Arthur Andersen and Vertis, 2001, p. 3). Second, there have been no significant problems related to waste-water treatment recently. In contrast, water control attracted considerable attention. For example, topics related to floods as result of prolonged rainfall, drought or possible increases in the sea level due to climate changes, are often brought up in the media.

Similar to the external stakeholders, the governing bodies express relatively limited interest in waste-water treatment as compared to other water board tasks. This may be related to this task's complex nature: it is often regarded as a rather technical task that can only be understood by professionals. Furthermore, members of the governing bodies view waste-water treatment as comprising little more than simply managing sophisticated production facilities, which – in their

opinion – needs no governmental invention. A final aspect that may explain the limited interest of the governing bodies is that to a considerable extent the objectives of waste-water treatment are not controversial because they are laid down in legal requirements. This also reduces the need for intervention by the governing bodies.

Together, the above factors explain the low level of stakeholder involvement in waste-water treatment. On the one hand, this circumstance – together with a limited market exposure – implied that the extent to which the water boards used the benchmarking information depended primarily on their intrinsic motivation to do so. On the other hand, it implied that the decision-making processes in the water boards that did decide to use this information were not much influenced by potential conflicts of interest. The low level of stakeholder involvement therefore had positive as well as negative consequences for the water boards' use of benchmarking information.

Willingness to imitate

The water boards did not seem to make full use of the learning and innovating possibilities that became available through the waste-water treatment benchmarking project. That is, in contrast with mechanism 1c, none of the four water boards that were investigated visited water boards with better benchmarking scores to learn about their business processes. Although there might be some water board specific explanations for this observation, it also suggests that in general the water boards hesitated to consult better performing organisations and to imitate their business processes. This is somewhat surprising, because the water board sector is highly interconnected. Managers and other employees from different water boards meet each other on various occasions, and individual water boards cooperate in several projects. Under these circumstances – and combined with the absence of market competition – we may expect that the barriers to exchanging information are not very high. Nevertheless, in practice it seemed as if the water boards had difficulty, not with providing information about their own business processes, but with asking for such information from other water boards. A second indication that the water boards were hesitant about imitating is that, in contrast with mechanism 6c, they do not regard benchmarking as a *low cost* means of learning and innovating. Apparently, the water boards did not compare the costs of benchmarking to the costs of other means of learning and innovating. We may conclude that although the water boards may appreciate their benchmarking project as a means to evaluate their performance and to indicate areas where improvements should be made, they did not regard it as a first step in learning from other water board's business processes.

Two mechanisms were confirmed only for the resisting water board. This difference between this water board and the other water boards can be explained by differences in sector membership and in ownership of the current performance.

Sector membership

When we concentrate on the difference between – on the one hand – the resisting water board and – on the other hand – the ambitious and satisfied water boards, sector membership appears to be an important explanatory factor. This factor is concerned with the degree to which an organisation identifies itself with sector-wide responsibilities. An important sector-wide issue in the water board sector concerned the future position of the water boards. In recent years, there was a discussion about the best way of organising the water boards' activities. The alternatives that were suggested included placing the water boards under the direct supervision of the central government, and dismantling the water boards and allocating their activities to other governmental organisations.

These alternatives implied a serious threat to the water boards' autonomy and existence. The waste-water treatment benchmarking project was partly intended to deflect this threat. That is, through the benchmarking project the water boards wanted to demonstrate that they operate effectively and efficiently.

The ambitious and satisfied water boards clearly act as sector members that have a collective responsibility to gain legitimacy for the sector as a whole. Both water boards also proved to be strong advocates of the benchmarking project, even though they had already rather good information about their relative performance. They felt that the water board sector as a whole had an obligation to show to the outside world that it takes its performance seriously. For this reason, the water boards played an active role in the design phase of the benchmarking project. In addition, they took a serious look at their own benchmarking results and took all necessary actions, and they were concerned that many other water boards had hardly acted on the benchmarking results. In contrast, the resisting water board operates more or less as an individual organisation that has its own responsibilities to meet the expectations of its stakeholders. This water board strongly resisted the benchmarking project, because it felt that it could not benefit from it. At the start of the project it was convinced that its performance was already at a 'competitive' level, and when the benchmarking results did not confirm this conviction, it argued that there was no need to be 'competitive'. The latter argument is consistent with the mechanism 1a.

In other words, regulatory pressure on the water board sector's efficiency and effectiveness stimulated individual water boards to use the benchmarking information. As such, this pressure partly replaced the role that economic markets may have in imposing performance improvements. A precondition for this to happen was, however, that the individual water boards were concerned with sector-wide responsibilities.

Ownership of current performance

Similar to the resisting water board, the dissatisfied water board is normally not one of the driving forces behind sector-wide initiatives, including the waste-water treatment benchmarking project. There is, however, a notable difference between them. Although both water boards were rather disappointed with their benchmarking scores, the dissatisfied water board investigated whether – given these results – changes in objectives and activities were required, whereas the resisting water board merely disregarded the results. This difference demonstrates the importance of ownership of the current performance, which refers to the degree to which staff members regard themselves as being responsible for the organisation's present performance level.

Within the resisting water board, this degree of ownership is high. This is due to the water board's long existence and large size: the water board is not only the oldest water board in Netherlands (founded as early as the 12th century), but it is also one of the largest water boards. People were proud of being a member of such 'large' and 'important' water board, and they felt that its status committed the water board to have a position among the best performing water boards. It was also their conviction that the water board's performance was quite good. The benchmarking results, however, seriously challenged these views. In this respect, especially the environmental perspective is interesting, because for this perspective there was a striking discrepancy between the benchmarking scores and the perception within the water board. It appeared that the water board regarded itself as an environment-minded organisation. Shortly before the publication of the benchmarking results, this was confirmed by an award that its office building was given for being the most durable and energy-efficient building in Europe. Given this situation, the poor

performance in the environmental perspective came as a great disappointment. The disappointing benchmarking results in this and other performance perspectives led to the defensive behaviour described in section 3. Subsequently, an extensive use of the benchmarking information seemed unnecessary, which is consistent with mechanism 4b. To some extent the interviewees were aware of the water board's defensive behaviour. For instance, without explicitly referring to their own water board, some of them argued that benchmarking results may challenge the presence of 'complacency'.

Within the dissatisfied water board the degree of ownership of the current performance is relatively low. This water board was established only a few years before the benchmarking took place. More precisely, it came into existence in 1994 after a merger of a few smaller water boards. Also in 1995 and 1997 it was involved in merger operations. It is only since the latter mergers that the water board has been concerned with waste-water treatment. Until the benchmarking results became available, the water board did not have a clear picture of its relative performance. The benchmarking project gave a first – rather disappointing – impression. This, however, did not lead to defensive behaviour, because the low performance could be blamed to the water board's predecessors. It was argued that due to their (mis)management, the water board was now confronted with a limited capacity to treat waste water, and with high tariffs. The water board drew up an overview of the recently undertaken and planned performance improvement actions, which was seen as evidence that it was on the right way to achieve an acceptable level of performance. In addition, the water board speeded up the implementation of its planned actions. This is consistent with mechanism 1b.

In short, the water boards regarded their disappointing benchmarking scores either as an allegation of mismanagement, or as a signal that the organisation's 'competitive' position must be improved. The above discussion suggests that the latter view is more likely when people got involved in the benchmarked activities only recently. Probably, this view is a condition for a more extensive use of benchmarking information.

A final difference that must be discussed in this cross-case analysis is a difference that appeared to exist between – on the one hand – the resisting and dissatisfied water boards, and – on the other hand – the ambitious and satisfied water boards.

Strength of managers

The empirical research in the resisting and dissatisfied water boards showed that – consistent with mechanism 5 – ambiguous objectives may hinder the implementation of action plans. The results for the ambitious and satisfied water boards, however, were inconsistent with this mechanism. The latter water boards had very clear, guiding, objectives, which seemed to minimize conflicts of interest. This might be explained by the strength of their waste-water treatment managers. In the ambitious water board, for example, the chair person, the member of the governing body who was interviewed, and the secretary-director, all were very positive about the water board's current performance, and showed much confidence in the expertise and motivation of the waste-water treatment managers. We might expect that managers who have attained such a position are able to balance the interests of different stakeholders (here: staff members and members of governing bodies with different backgrounds), to integrate these interests into a clear-cut strategy, and to apply this strategy. Under these circumstances, stakeholders will agree on the actions that should be taken, and on the sequence in which these actions should be taken. This situation was clearly

lacking in the dissatisfied and resisting water boards, which hindered the quick implementation of certain performance improvement actions.

6 Conclusions and discussion

This paper examined whether – and if so, under which circumstances – it is likely that public sector organisations use benchmarking information for performance improvement purposes. In this respect, it focused on the influence of specific characteristics of public sector organisations. A theoretical analysis showed that, although some of these characteristics may have a positive influence, many characteristics of public sector organisations can be expected to affect the use of benchmarking information negatively. Nevertheless, despite the numerous hindering characteristics, the empirical research revealed that information from a waste-water treatment benchmarking project was – to a varying degree – used by Dutch water boards. This result suggests that public sector organisations can overcome the barriers to the use of benchmarking information. However, we must acknowledge that the Dutch water board sector and its benchmarking project have a few specific characteristics, which probably have influenced the empirical results. Still, we can draw some conclusions from this empirical research that can be relevant in a broader context.

The first conclusion concerns the substitutes for market incentives that are available in the public sector. The empirical research showed that with a low exposure to economic markets, public sector organisations may ignore information – including benchmarking information – that indicates that their relative performance is poor. The theoretical analysis discussed an alternative to market incentives, namely internal and external stakeholders can pressure public sector organisations to improve their relative performance. In the Dutch water board sector, the most significant source of stakeholder pressure was a regulatory pressure on the sector as a whole which urged the sector to demonstrate that water boards are the best mode of delivery of the services in question. It was shown that this pressure may influence the behaviour of individual water boards, but only if these organisations identify themselves with sector-wide responsibilities. In other parts of the public sector, however, stakeholders may be more closely involved with individual organisations. In such a setting, the link between stakeholder pressure and performance improvement is more direct, and for this reason it might be less important that individual organisations assume a role as responsible sector members. Some parts of the public sector are actually (increasingly) exposed to economic markets, in the sense that their customers have the right to select their own suppliers. Public sector organisations then probably do not need stakeholder pressure to have an incentive to maintain or improve their relative performance, because underperformance may have a negative impact on the organisation's revenues.

The waste-water treatment benchmarking project also showed that public sector organisations may have difficulties with gathering information about superior business processes, and hence with imitating such processes. Due to these difficulties, they may not be able to realise the full potential that benchmarking may have, especially in a context in which clear market signals are missing. For this reason, public sector organisations might consider institutionalising the imitation process, which would imply that cooperation between the benchmarking partners is not only embedded in the performance measurement and analysis stage of a benchmarking project (as it was in the waste-water treatment benchmarking project), but also in the performance improvement stage. Organisations might, for example, be stimulated to discuss the business processes that underlie the better benchmarking scores. Apart from that, individual organisations need to develop a

benchmarking culture. Implicitly, the empirical research referred to all aspects of a benchmarking culture that were mentioned in subsection 2.2, including 'an eagerness to learn from other organisations', 'an openness in exchanging information', and 'a willingness to adopt or adapt ideas developed elsewhere'. In other words, benchmarking culture is of great importance, not only in private sector benchmarking, but also in public sector benchmarking.

The final conclusion is related to the role of managers and other staff. On the one hand, the empirical research suggested that staff members should not identify themselves too much with the organisation's current performance. The waste-water treatment benchmarking project showed that otherwise they may focus more on defending their performance than on improving it. An improvement-oriented attitude might require that staff members do not occupy the same positions for a longer period of time. On the other hand, the empirical research stressed the importance of having powerful managers. This is related to public sector organisations' multiple, diverse and often conflicting objectives. In the Dutch water board sector, the presence of such objectives caused delays in the implementation of action plans, because various stakeholders did not agree on the question which priority should be given to individual plans. Powerful managers were able to prevent such delays by developing, gaining support for, and applying, a clear, guiding, strategy that balances the various interests that are involved. However, it should be noted that the objectives of the waste-water treatment sector are rather simple. Roughly speaking, the effectiveness of waste-water treatment (the percentage of waste products that are removed from the waste water) must be weighed against the costs of such a level of effectiveness. In other parts of the public sector, objectives are probably more complex in the sense that the quality level of a particular service must be compared, not only with the costs incurred, but also with the quality levels of other, quite different, services. Under these circumstances, it will be much more difficult to develop and apply a clear strategy.

We conclude that the present paper has improved our understanding of the use of benchmarking information in a public sector context. It confirmed the importance of several mechanisms that the literature hints at, it uncovered various other mechanisms, it integrated all mechanisms in a single framework, and it explored the circumstances under which certain mechanisms can or cannot be expected. However, since our empirical exploration was restricted to a rather specific setting, further research in the interesting area of public sector benchmarking is needed. It would be worthwhile to investigate the applicability of the theoretical framework in empirical settings with, for instance, a higher level of stakeholder involvement, a higher level of market exposure, and/or more complex objectives. Interesting areas include the local government sector, the health care sector, and the education sector (primary and secondary schools as well as universities). Hopefully, this paper will be a valuable starting point for that type of research.

Websites:

<http://www.waterschappen.nl> (March 2005)

websites of the water boards involved in the empirical research (March – May 2005)

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