

# **Performance Measurement in Local Government**

## *Organisational Control in Political Institutions*

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Dissertation submitted to the  
Department of Strategy and Management at the  
Norwegian School of Economics and Business Administration  
in partial fulfilment of requirements for the degree of Dr. Oecon.

December, 1999

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ISBN 82-405-0036-6

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# Preface

This thesis is an enquiry into organisational control in political institutions. I have sought to choose the simplest methods available in this thesis, both due to my own limited capability, and because of priorities in this project regarding emphasis and time constraints. I have judged the potential for a modest contribution from my project to the ongoing scientific debate in organisation theory to be related to relatively simple, but basic questions in organisational control. Specifically, I have questioned some issues which in my point of view to a large extent and undeservedly have been taken for granted. These taken-for-granted notions are what I in this thesis have called the conventional wisdom in management control.

My interest in the conventional wisdom in management control stems from several sources. I have during brief periods of time worked in municipalities, on one occasion as the chief financial executive in a small municipality. I have also as a researcher during several years had the pleasure and opportunity to participate in performance measurement development projects in the Norwegian local government, resembling both action research and management consulting. These projects and networks have given me a rich prior knowledge to the present project, both with regard to internal politics in the local authorities, as well as between central and local government and various interest groups. This background has also given me first hand and sometimes also an 'insiders' experience with these performance measurement issues. However, I have wanted to avoid a potential pitfall due to possible claims of vested interests or advocacy roles in some of the experiences from the Scandinavian local government which I personally have participated in, which otherwise could have been put forward for instance by doing in-depth case studies.

From my undergraduate studies in public administration, graduate studies in business



management, postgraduate studies in management, and my own lecturing, I have noticed that what is taught in lectures and written in textbooks, are sometimes only loosely coupled with management practice. Furthermore, the academic life is often governed by strong traditions and the invisible boundaries between the disciplines but which nevertheless study identical phenomena. Maybe I have an educational background and a work experience, albeit limited, which nevertheless could have provided the relevant training and practice to study such multi-disciplinary phenomena as organisational control which otherwise could be ill-defined by studies within one discipline only. In order to focus this thesis I have deliberately tried to use standard, classical organisation theory as frame of reference and written with other students of organisation theory as intended audience. However, this audience is both fragmented and ill-defined. A more precise notion of the intended audience could rather be fellow students of organisational control. This community is not only comprised of scholars and researchers working in universities and business schools in the traditionally sense, but is maybe as least as much populated by management consultants, evaluators, managers, accountants and auditors.

In organisation theory there are several research traditions to draw from. Given that such labels provide any meaning, in this thesis I have tried to pursue an Anglo-American 'positivist' research tradition within the organisation theory, rather than a Scandinavian relatively case oriented research tradition, or a Continental, often either a critical or a postmodernist, research tradition. There is now an extensive, disperse and growing literature on performance measurement. In order to simplify the communication with the heterogeneous organisation theory community, I have tried to the largest extent possible to employ standard, international, scientific literature. I have therefore laid relatively much effort in trying to build on the existing literature and profit from the previous reported experiences from colleagues. With the above considerations in mind, I have also sought to write a short thesis. However, there evidently has been a bias towards using only English literature in this thesis. Regarding contributions published in the Scandinavian languages, I have discussed certain topics and published these papers in some of the Scandinavian management and political science journals. However, regarding contributions made in other languages than in English or Scandinavian, my limited language skills have restrained me both from reviewing, and from profiting from this literature. I have judged the above sketched approach regarding

my project as providing the best potential for establishing new insights and providing a modest contribution to our understanding of organisational control.

Kristiansand, December 1999

In this version I have reformatted the thesis to page size A4 with one and a half line spacing. I have also corrected some typos.

Oslo, 13 February 2007

# Acknowledgements

Many individuals and institutions have contributed to my work on this thesis. First of all, I want to thank the students at the Norwegian School of Economics and Business Administration and at Agder University College who helped me with parts of the data collection autumn 1997 and spring 1998. Also thanks to Kjell Grønhaug and Tor Fredriksen at the Norwegian School of Economics and Business Administration who gave me the opportunity to share my thoughts and to co-operate with the students in their 'Strategy in public sector enterprises' course.

During the data collection phase I have generously received reports and profited from discussions with Audun Langørgen at Statistics Norway. I have also profited from the services of the Norwegian Social Science Data Service.

I am very pleased that my employer since 1989, Agder Research Foundation, granted me what should become a five year leave, first two years to complete my postgraduate studies, and then three more years which gave me the freedom to become a doctoral student and research fellow at the Norwegian School of Economics and Business Administration. I am also most grateful to my many collaborators at Agder Research Foundation; first of all to of my closest colleagues, Kenneth Andresen, Liv Bente Hannevik Friestad, my chief Anne Halvorsen, Jan-Erik Hallandvik, my former chief, Robert Helland-Olsen, Hans Christian Garmann Johnsen, and Sigbjørn Sødal. Thanks also to my many collaborators in the Norwegian local government since 1989, especially in Vest-Agder county and in the six municipalities of Bærum, Drammen, Skien, Kristiansand, Sandnes and Stavanger. Thanks also to the Norwegian Association of Local and Regional Authorities for their support and co-operation through many projects, and to the Confederation of Norwegian Business and Industry. Financial support from the Norwegian Research Council, through the strategic institute

programme at Agder Research Foundation on local government finance and accountability, during the final work with my doctoral dissertation project is also acknowledged.

Since 1999 I have also been a Senior Lecturer at the Local Government Administration Programme at Oslo College. I want to express my gratitude to my superiors, colleagues and the students for their splendid collaboration, both in granting me a leave in order to finish this project, and in providing me the opportunity to combine research and lecturing in such inspiring way.

I am very grateful to Frøystein Gjesdal from whom I received the most impeccable advisory comments when I wrote my postgraduate thesis in 1995–96 at the Department of Organisation Studies at the Norwegian School of Economics and Business Administration. Albeit the research question and data in the postgraduate thesis were distinct from the project in this thesis, the postgraduate thesis turned out to lay much of the theoretical groundwork for this doctoral thesis.

A research project proposal was presented at the Scandinavian Academy of Management Ph.D. Conference in Sulitjelma, August 12–14, 1997. Here I had the opportunity to present my early ideas for my project and receive the valued guidelines from Frøystein Gjesdal, Jan Mouritsen and my fellow doctoral students.

Throughout all the three years I had the privilege of being a doctoral student at the Department of Strategy and Management at the Norwegian School of Economics and Business Administration, I received many valuable comments at discussions, seminars and at the annual Norwegian Conference on Business Studies (FIBE) on several occasions. These contributors include Svein Erik Bakke, Trond Bjørnenak, Bjarne Espedal, Andreas Falkenberg, Joyce Falkenberg, Tor Fredriksen, Paul Gooderham, Arent Greve, Kjell Grønhaug, Ann Cathrin Haueng, Sven Haugland, Helge Hernes, Sverre Høgheim, Erik Werner Jakobsen, Arne Kalleberg, Olav Kvitastein, Christine Meyer, Sven Modell, Torstein Nesheim, Odd Nordhaug, Norvald Monsen, Olov Olson, Jørn Rognes, Aksel Rokkan, Vidar Schei, Inger Stensaker, Anita Tobiasen, Laura E. Mercer Traavik, Svein Tvedt Johansen, and Gunnar Magne Økland. In particular I have greatly benefited from innumerable discussions and comments from Erik Døving during all these three years.

In March 1999 I was a Young Visiting Research Fellow in the EU-programme Accounting and Management Research in Reform of European Health Care Systems

(AREHCAS), at the Institute of Public Sector Accounting Research (IPSAR), Department of Accounting and Business Method, University of Edinburgh. Here I generously received comments on my preliminary findings from Irvine Lapsley and my fellow doctoral students William (Bill) Jackson, Liisa Kurunmäki, Barbara Philippi, and Simona Scaparo. I also greatly benefited from comments and discussions on content analysis and public sector accounting research from many members of the staff, including Kerry Jacobs, David Hatherly, Sue Llewellyn, Falconer Mitchell, and Christopher K.M. Pong. Thanks also to John Innes at the University of Dundee for lending me his books.

A paper based on parts of this thesis was presented at the International Institute of Administrative Sciences (IIAS), co-sponsored by the School of Public Administration, University of Ljubljana, Workshop on Public Sector Productivity 'Measuring Performance and Value in the Public Sector' in Portoroz, Slovenia, March 4–5, 1999. I acknowledge comments from all the workshop participants and especially from Ariel Halachmi (Tennessee State University), Kai Masser (Post-Graduate School of Administrative Sciences Speyer), Jarmo Vakkuri (University of Tampere), and Peter Warrian (University of Toronto). Thanks also to the Norwegian Ministry of Local Government and Regional Development for their financial support.

My closest colleagues in public sector management during many years, Dag Ingvar Jacobsen, Karl Robertsen, Theis Theisen and Dag Yngvar Åsland, all at Agder University College, have all contributed more than they know and I possibly would admit. Their inspiring teaching and splendid collaboration in our local government finance and public management research cooperation since the mid 1980s have again and again inspired me to pursue the studies of organisational control in political institutions.

I am most grateful to my main advisor, Tom Colbjørnsen, for his thoughtful comments and wise coaching of the project. His encouragement and positive attitude to my work, both during the final stage when I was a postgraduate student, and through all the three years I was a doctoral student, has been heartfelt appreciated. I have also greatly benefited from the insightful and constructive comments from the other members in the advisory committee: Frode Mellemvik, Bodø Graduate School of Business Administration, and Rune Sørensen, Norwegian School of Management, especially during the initial and final stages of this project.

Lastly, a heartfelt thanks to my family and friends for their love and encouragement. In particular, I am profoundly grateful to my co-habitant Tine Christoffersen, both for her practical help, moral support, and for her understanding and patience with me, during these years.

Kristiansand, December 1999

# Abstract

This thesis deals with how asymmetric information and uncertainty affect performance measurement in local government organisational control. Performance measurement was found to be extensively studied in the classics of organisation theory, especially in conjunction with organisational learning. However, conventional wisdom predicts that with uncertain and ambiguous contingencies, organisations will use budget control, clan control or political control. Other use of formal control structures will largely be symbolic and decoupled from internal actions. Public choice, agency theory and the resource dependence perspective have in this thesis been suggested as a core of a performance measurement research programme. Experiences with performance measurement actually used in the public sector in the 1980s and 1990s, as documented in 24 studies reported in scholarly journals, were systematically reviewed, and 10 hypotheses were formulated. Prior performance measurement indexes reported in the literature were in the present study modified to also incorporate verbal conclusions in addition to numerical performance indicators. Data from 162 Norwegian municipal annual reports was then collected by content analysis and analysed with difference between means in crosstabulations, multiple regression, and by a simple case study. Contrary to conventional wisdom, performance measurement was found to be extensively used and particularly under asymmetric information and uncertainty. Implications of the findings point to the need to utilise agency theory, classical contingency theory and the resource dependence perspective more in public management theory.





# 1 Introduction

This thesis addresses organisational control in political institutions. The research theme, organisational control, is virtually concerned by the entire organisation theory literature. *Organisational control* is defined as a theory which specifies the differences between executive choice in an organisation and the decisions actually implemented (Cyert and March, 1963/1992). Control has also been defined as any process in which a person or group of persons or organisations determines or intentionally affects the behaviour of another person, group, or organisation (Tannenbaum, 1968). Organisational control comes from the knowledge that someone who matters to somebody in an organisation pays close attention to what is going on and tells the latter if the behaviour is appropriate or inappropriate (Pfeffer, 1997). Organisational control processes encompass recruitment and selection, training and socialization, organisational design as decentralization, leadership, planning and implementation, accounting and auditing, use of incentives, and monitoring and evaluations. The *institutions* of a society are defined as the rules specifying the roles that particular persons will assume in relation to one another under certain circumstances (Simon, 1947/1997). *Theories of institutions* deal with chief executives, legislatures, parties, and bureaucracies, and their interactions (Hammond, 1996). In this thesis I have studied performance measurement in local government as organisational control in political institutions.

In the empirical public choice and public finance literature it is common to study local government as utility maximizing agents where the agents seek to influence the municipal welfare by decisions on municipal expenditure levels, user fees and budget deficit. The US approach relies on the median-voter model. This model assumes that organisational decisions reflect the demand of the median voter as political elections in the USA are performed as majority election of single representatives in each election

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area. The European approach uses models where the local government is a unitary actor which maximizes a demand function (makes decisions) conditioned by socio-economic factors, electoral institutions, and local government institutions. The decision-making unit is typically a dominant political party or coalition of parties (Borge, Rattsø and Sørensen, 1995; Langørgen and Aaberge, 1997).

The local government institutions are assumed to aggregate individual preferences into policy objectives that are implemented through the spending decisions. The main justification for local government is responsiveness. There are however four information problems which may reduce cost efficiency and allocative efficiency (and equity) in the optimization of the representatives' preferences on behalf of the voters (Sørensen and Hagen, 1995). First, democratic government may include elements of paternalism. This may be legitimate when the voters have incomplete information. When the representatives have incomplete information regarding the voters' preferences, this may pose a severe problem. However, Sørensen and Hagen (1995) found high a congruence between representatives' and voters' preferences. Second, imperfectly informed citizens may have problems controlling their representatives and the bureaucracy. Under this heading one may also include implementation problems as not all decisions are executed as they were intended to. Extensive empirical research has confirmed some of these theories' claims (Blais and Dion, 1991). Third, reactive voting may punish or reward the representatives. However, this form of voter control may be difficult if crucial output measures are lacking, as for instance performance measurement. Furthermore, this lack of information may also pose severe problems to the representatives. Fourth, citizens may migrate to municipalities which provide services and taxes according to their preferences (Tiebout, 1956). This may enhance overall Tiebout efficiency and also facilitate the responsiveness of local government. For instance, Andersson and Carlsen (1997) studied Tiebout mobility in Norway and found only few effects of municipal services on municipal migration rates, albeit there are unresolved methodological problems in such analyses, for instance simultaneity in the regression models. However, decisions both to migrate, and to counter migration, are also made complicated when valid performance measures are lacking. Hence, performance measurement could be of high relevance in local government organisational control, although its relevance may vary between different countries.

There is no coherent body of theory on performance measurement (e.g. Holloway,

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Lewis and Mallory, 1995), but the organisation theory literature has used the term performance measurement at least since the 1950s (Ridgway, 1956). Public sector performance measurement has several labels differing between disciplines and perspectives. In public administration both review (Simon, 1947/1997), cost benefit analysis, policy analysis, programme analysis (Wildavsky, 1966, 1978) and evaluation are employed as characterizations. In contingency theory (Thompson, 1967) labels as search, surveillance and monitoring are used. In the resource dependence perspective (Pfeffer and Salancik, 1978) performance measurement is termed as benchmarking, environmental scanning, and monitoring. In agency theory (Jensen and Meckling, 1976) performance measurement, accounting and auditing are part of organisational monitoring, which has also been labeled metering (Alchian and Demsetz, 1972). In public choice both oversight (McCubbins and Schwartz, 1984) and monitoring (Zimmerman, 1977; Bendor, Taylor and Gaalen, 1985, 1987) are used to denote performance measurement. Performance measurement seems to be a fundamental concept in several theories on organisational control. Moreover, monitoring and performance measurement is a central method in disciplines as in public sector financial accounting (Zimmerman, 1977), auditing (Baber, 1983; Watts and Zimmerman, 1983), and in evaluations (Chelimsky and Shadish, 1997). Within public sector auditing, performance measurement is extensively used in value for money (VFM) auditing, also termed comprehensive auditing (Power, 1997). Both within organisation theory and in the public sector management literature performance measurement is widely used and that term is also what I have employed in this thesis.

Although organisation theory is not an old nor a coherent research programme (Donaldson, 1995), some contributions may nevertheless be distinguished as classical. It could be noted already at the onset that many of the seminal contributions to organisational control, e.g. Simon (1947/1997) on administrative behaviour, Cyert and March (1963/1992) on the behavioural theory of the firm, Thompson (1967) on contingency theory, Pfeffer and Salancik (1978) on the resource dependence perspective, and Jensen and Meckling (1976) on agency theory, explicitly addressed performance measurement and the relevance of their works also for public sector organisations. Thus, the classical literature in organisation theory is permeated with issues on organisational control in political institutions, and also on performance measurement. However, it seems as much of the subsequent literature on public sector

management has neglected this aspect of the classical literature. I shall therefore now briefly recapitulate what is currently conventional wisdom in organisational control.

CONVENTIONAL WISDOM IN ORGANISATIONAL CONTROL

Contemporary conventional wisdom in organisational control, cf. figure 1, seems to be informed by contingency theory and new institutionalism developments in the 1970s (Wildavsky, 1986; Ouchi, 1979; Hofstede, 1981), and not on the classical contingency from the 1960s, i.e. Thompson (1967).

		Uncertainty regarding means (output)	
		<i>Low</i>	<i>High</i>
<b>Ambiguity regarding ends (behaviour)</b>	<i>Low</i>	Input (budget) control Expert control Behaviour control or Output control	Intuitive control Judgmental control Trial and error control Output control
	<i>High</i>	Behaviour control Rules (routine control) Standardisation	Political control Clan control Rituals, ceremonies and myths

**Figure 1.** A conventional wisdom management control framework

Wildavsky (1986) argued that the traditional budget negotiating processes of input control continued as the dominant model for organisational control despite more ‘advanced’ management control models as planning, programming and budgeting systems (PPBS), and performance measurement. Large organisations are complex with many organisational levels, numerous line items in the budget, several outputs, and many stakeholders. As the traditional budgeting processes do not score highest judged one by one on all criteria a manager could put forward for a management control model, for instance simplicity and information about output, the traditional budgeting process still matches these criteria best in total. A large budget (in a large and complex

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organisation) may therefore call for the use of the traditional budgeting (input control) processes rather than control models as performance measurement (output control).

Ouchi (1979) asserted that the principal either monitors behaviour if output is uncertain, or the principal monitors output if behaviour is uncertain. However, in political institutions one may assume that both behaviour and output are uncertain simultaneously. According to the present conventional wisdom in contingency theory, organisations with uncertain contingencies will not employ instrumental control structures as performance measurement but rather use complexity reducing and conflict settling processes as traditional line item budgeting, or employ professionals in what is called clan control (Ouchi, 1979).

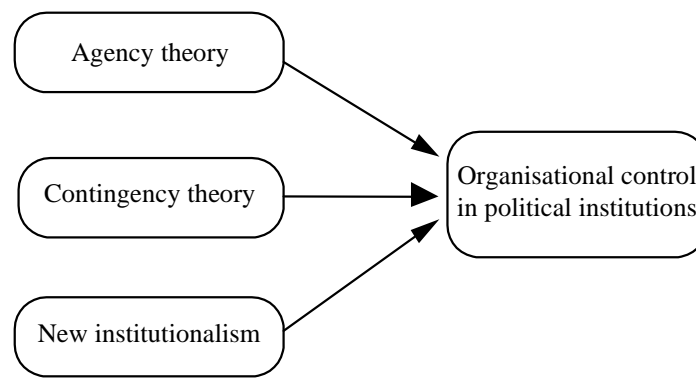
Hofstede (1981) elaborated both Wildavsky's (1986) and Ouchi's (1979) arguments. Some new distinctions as expert, intuitive, judgmental, trial and error, and political control were introduced, but the basic neglect of performance measurement as a control instrument under contingencies of uncertainty and ambiguity was upheld. Nevertheless, performance measurement seems to have proliferated and been widely used in political institutions, at least in the 1980s and 1990s.

An alternative explanation on organisational control structures to both agency theory and contingency theory comes from the historical, sociological perspective of new institutionalism. Here it is asserted that formal structures as performance measurement are used for legitimization. Meyer and Rowan (1977) argued that organisations 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 organisations would merely produce a record of inefficiency and inconsistency. Such organisations therefore decouple structure from activity. Hence, organisational control efforts, especially in highly institutionalized contexts, are devoted to ritual conformity, both internally and externally.

Another branch of the new institutionalism has studied isomorphism. *Isomorphism* is defined as a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions (DiMaggio and Powell, 1983). The proposition put forward here is that organisations adapt to uncertainty by coercive, copying or imitating actions, employing organisational forms which other organisations in the organisational field have adopted. *Organisational field* is defined as those organisations that, in the aggregate, constitute a recognised area of institutional life: key

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suppliers, resource and product consumers, regulatory agencies, and other organisations that produce similar services and products. Thus, local government may be conceived of as an organisational field. Although there is no single characteristic which in itself is sufficient to define local government, some common characteristics may at least describe 'pure' local government (Cole and Boyne, 1995): Jurisdiction over a substantially smaller area than the national government, election by popular vote, powers of taxation, and genuine discretion over service provision. Thus, what we understand as local government in one country may not be identical with local government in other countries or even be constant historically within a country.



**Figure 2.** Research theme

Three mechanisms are used to explain the processes of homogenisation. Coercive isomorphism stems from political influence, especially from the state, and the problem of legitimacy. Mimetic isomorphism is used to adapt to uncertainties by looking at other, presumed successful entities. Normative isomorphism is associated with professionalization. However, in all three mechanisms organisations are supposed to adopt formal structures far beyond a level where efficiency explanations solely prevail.

In summary, the conventional wisdom in organisational control has well developed propositions. However, for the student of organisational control, the interesting part of this picture is that the three perspectives outlined above, agency theory, contingency theory and new institutionalism, all have divergent propositions and explanations, cf. figure 2. Agency theory states that performance measurement is used under asymmetric information and uncertainty. The classics in contingency theory state that complex organisations use performance measurement under uncertainty, both to reduce

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uncertainty, and as legitimisation. The widespread conventional wisdom in contingency theory, however, state that under uncertainty complex organisations mainly reduce complexity by adopting budgeting or else employ professionals if there simultaneously is ambiguity. The symbolic perspective in new institutionalism state the same view as the conventional wisdom in contingency theory, but adds that formal structures as performance measurement may be used as symbols decoupled from the factual organisational control structures as budgeting or clan control. The isomorphism proposition is less concerned with symbolism than with coping with uncertainty. Thus, within new institutionalism the two propositions have dissimilar causal explanations on organisational control.

### THIS THESIS' POSITION

Monitoring (i.e. performance measurement) is used in many forms (Hammond, 1996). Politicians and managers can talk directly with subordinates in the bureaucracies. Politicians and managers can utilise reports from constituents and interest groups. Politicians and managers can maintain a policy staff or employ academic experts or consultants to enhance their information processing capabilities. Politicians and managers can also observe the consequences when information and advice are relied and acted upon. Formal structures as performance measurement are assumed or designed to affect how organisations carry out its activities in several ways. First, individuals in the organisations must collect and process information in order to learn what problems the organisation should handle. This is the issue of effectiveness and equity. Second, the organisation must choose means, policies, technologies and actions, to handle these problems. This is the issue of efficiency and reliability. Third, the organisation must resolve the inevitable conflicts which arise in implementation of the policies. All these three issues involve bottom-up processes of information, advices and conflicts, and comparisons between different issues. Different organisational control structures as formalization, decentralization and reporting, can be expected to affect these comparisons and thus the organisational outcome. According to this account, performance measurement is a complex organisational form and may be adapted to a variety of usages in complex organisations as in political institutions.

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The proposition put forward in this thesis is that instrumental control structures as performance measurement are extensively used in political institutions and in particular in contingencies of uncertainty and ambiguity. Uncertainty in organisations stems both from lack of cause/effect understanding in the culture at large, contingency in which the outcomes of organisational action are in part determined by the actions of elements of the environment, and interdependence of internal components (Thompson, 1967). Political institutions may have extensive use of performance measurement because the principals, the organisational or political legitimate authorities, due to uncertainty, use several control models simultaneously in control of their agents and in dealing with the environment. Performance measurement may be employed when lobbying is costly or uncertain to constituencies and interest groups. Furthermore, performance measurement may also be performed in order to reduce uncertainty, address ambiguity, and enhance organisational effectiveness, equity and legitimacy in the longer run by organisational learning. Lastly, the agents use performance measurement in their internal competition for scarce resources.

The proposition put forward in this thesis is at odds with the presently dominant conventional wisdom explanations of organisational control in contingency theory and the symbolic perspective of new institutionalism, as found in accounting. The contingency theory states that when uncertainty raises as an effect of task interdependence and complexity, instrumental control structures are outperformed by traditional budgeting processes. Traditional budgeting processes are assumed to deal with uncertainty and complexity more efficiently by focusing on financial input and line items, by settling conflicts by negotiating, and by incremental adjustments relative to prior year's budgeting outcomes. Moreover, the proposition also challenges, or at least complement, the dominant symbolic perspective on organisational control in sociology and political science. New institutionalism explains use of control structures in institutionalized environments as predominantly ceremonies and rituals to symbolize rationality in order to enhance or sustain legitimacy and resources. Political institutions have typically been analyzed as subject to symbolic use of organisational control structures due to high degree of ambiguity and uncertainty resulting in inconsistency. It should be noted though that the new institutionalism perspective also has explanatory force in lesser institutionalized contexts as in business organisations.

The proposition put forward in this thesis is congruent with the positive political



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theory (PPT) of the economics of organisation (Moe, 1984, 1990, 1991) when this theory is applied to the context of local government. Furthermore, this perspective is to a large degree congruent with agency theory, classical contingency theory, organisational learning, the resource dependence perspective, and with the mimetic isomorphism proposition in the new institutionalism. The rest of this thesis is an account of how this conclusion has been arrived at. However, as applications of economic organisation theory to political institutions in local government hitherto only seldom have been undertaken, and moreover, as many fellow students of organisational control in accounting, economics, management, political science and sociology may be unfamiliar with the application of the economics of organisation to political institutions, a brief review of the positive political theory of institutions is presented in the theoretical framework in chapter 2.

### RESEARCH QUESTION AND CONTRIBUTION

Scott (1995) gave three guidelines for future research in conclusions of his extensive review of institutionalism and organisations. His first recommendation was to conduct longitudinal studies of life events in institutions. This, however, presupposes that relevant research questions, concepts, variables and research instruments is or could be made readily available. This has not yet been the case in positive theory on performance measurement in political institutions. I have therefore not chosen a longitudinal study.

Scott's second recommendation was to focus on the relation between institutional and organisational processes, for instance by studies of institutional changes in 'natural' experiments.

**Table 1.** General government total outlays as % of nominal GDP

	1970	1975	1980	1985	1990	1995	1997	1999 <sup>a</sup>	2000 <sup>a</sup>
Australia	–	31.4	31.4	36.5	34.8	36.2	35.0	33.6	33.3
Austria	37.6	44.3	47.1	50.4	48.6	52.5	49.8	49.4	49.2
Belgium	41.5	50.8	57.0	60.7	53.6	53.6	51.7	50.5	49.9
Canada	34.1	39.2	39.6	46.0	46.7	46.5	42.6	41.8	41.2
Czech Republic	–	–	–	–	–	44.8	45.3	46.1	46.1
Denmark	–	47.1	55.0	58.0	56.0	58.8	56.4	53.8	52.5
Finland	30.0	37.6	38.1	43.8	45.4	57.9	54.1	49.0	48.6
France	38.5	43.4	46.1	52.1	49.8	54.3	54.2	53.9	53.5
Germany	38.3	48.4	47.9	47.0	45.1	49.8	47.9	46.9	46.3
Greece	–	27.9	30.4	42.9	48.2	48.3	42.9	41.7	41.1
Hungary	–	–	–	–	–	49.2	45.0	40.7	40.9
Iceland	–	–	32.5	35.7	39.3	39.0	36.7	35.9	35.5
Ireland	–	–	48.2	51.0	39.0	37.6	34.7	32.8	32.1
Italy	32.8	41.1	41.9	50.9	53.6	52.7	50.6	49.4	48.8
Japan	19.0	26.8	32.0	31.6	31.3	35.6	35.2	38.4	39.1
Korea	–	17.1	19.3	17.6	18.0	20.5	21.9	25.7	25.7
Luxembourg	–	–	–	–	13.4	13.2	13.2	12.8	12.7
Mexico	–	–	–	–	17.2	17.7	15.5	13.9	13.5
Netherlands	41.3	50.2	55.8	57.1	54.1	51.3	48.7	47.5	47.3
New Zealand	–	–	–	–	48.8	38.8	38.5	41.4	40.4
Norway	34.9	39.8	43.9	41.5	49.7	47.6	44.3	47.2	47.5
Poland	–	–	–	–	60.8	49.3	46.8	44.7	43.7
Portugal	19.5	28.0	23.2	40.2	40.6	44.6	43.9	43.7	44.1
Spain	21.6	24.4	32.2	40.2	42.5	45.5	42.2	40.8	40.3
Sweden	42.8	48.4	60.1	63.3	59.1	65.6	62.3	59.6	58.1
Switzerland	–	–	–	–	41.0	47.5	48.8	49.2	49.3
Turkey	–	–	–	–	27.9	26.5	24.3	23.9	25.2
United Kingdom	37.2	44.8	43.4	44.4	41.8	44.4	41.0	40.3	40.6
United States	30.0	32.8	31.4	32.9	32.8	32.8	31.6	31.2	31.1
N	15	19	21	21	27	29	29	29	29
Mean	33.3	38.1	40.8	44.9	42.2	43.5	41.6	40.9	40.6
St.deviation	7.9	9.9	11.3	10.8	12.4	12.3	11.7	11.2	11.0
Maximum	42.8	50.8	60.1	63.3	60.8	65.6	62.3	59.6	58.1
Minimum	19.0	17.1	19.3	17.6	13.4	13.2	13.2	12.8	12.7

*Note.* Source: Analytical Databank, OECD.

General government outlays include: Expenditures of all levels of public authorities and its administration both at the central or federal, regional, and local levels, and social security funds; public services provided by the government on a non-market basis as public schools, hospitals and welfare services; non-profit institutions service provision on a non-market basis which are controlled by and mainly financed by the public authority; and social security funds imposed, controlled or financed by public authorities; but it does not include public enterprises.

a Estimates and projections. Source: Economic Outlook No. 64, December 1998, OECD.

Table 1 documents the relative size of the public sector in the OECD countries, measured as general government outlays as a percentage of nominal gross domestic product (GDP). General government total outlays increased in most countries from the 1970s to the mid 1990s. However, in the 1990s many countries have decreased their public sector or are facing a decreasing public sector. Public sector attempts to apply, develop, and implement certain organisational forms could be regarded as organisational

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control of political institutions in transition from a growth phase through the 1960s and 1970s to a maturation and consolidation phase in the 1980s and 1990s. Performance measurement has been a core dimension in the reinventing government movement and in new public management (NPM) reforms throughout the 1980s and 1990s (Hood, 1991, 1995; Thompson and Riccucci, 1998). In this respect the effects of performance measurement may be relevant to study. Performance measurement in political institutions is an utterly complex and ill-defined issue. Much of the agency theory research on monitoring has been on firms and in financial management. Furthermore, positive studies (Jensen, 1983) on the use of performance measurement in local government seem at present to be under-researched, and further studies therefore seem warranted.

Scott's third recommendation was to perform more comparative studies by developing and testing generalizations rather than explaining histories of complexities and uniqueness. This calls for theory-testing and correlational studies rather than theory-development and explorative studies. In this thesis I have chosen to study central concepts and problems from the organisational control literature in a test of competing theories on organisational use of performance measurement, using a correlational research design.

A central theory in the economics of organisation is agency theory. Agency theory is about organisational control under uncertainty in general. Common problems addressed in agency theory are the existence of asymmetric information, adverse selection and opportunism. *Asymmetric information* is a situation where some actors in a transaction process have better access to some information than other actors have, in short: Some actors know more than others. A parallel concept to asymmetric information is *private information* which is defined as information which is relevant to determine efficient allocations that is known to only some subset of the parties involved (Milgrom and Roberts, 1992). *Opportunism* may be defined as self-interested behaviour unconstrained by morality (Milgrom and Roberts, 1992). Agency theory directs attention to the possibility that some agents could behave opportunistically and utilise asymmetric information, but not that every agent will do so.

A special branch of agency theory which focuses on political institutions in particular, is public choice, which will be briefly reviewed in chapter 2 and 3. However, positive theory on bureaucracies and especially the politics of political institutions, have

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largely been neglected (Moe, 1990; Williamson, 1990). This characterization of the positive political theory research programme may be due to its recency (Fiorina, 1990). A normal development of a research programme is both to borrow concepts and methods from more established research programmes, and to start with the relatively easy and work towards the difficult. These features also characterize this research programme. The borrowing from economics may have led to an over-emphasis on the economic research tradition. The borrowing from political science may have furthered an inclination to study legislatures. Positive theorists in the social choice tradition have largely studied legislation and election and American politics research has focused on the Congress. A theoretical development is easiest when it can stand on a solid foundation of empirical research. As the positive political theory of institutions is still a young research programme, its path-dependence on other research programmes' agendas may be outgrown through maturation. To achieve this, theories have to be matched with data in a systematic way, according to Fiorina (1990). This thesis is one such attempt.

Despite the general nature of the economics of organisation, relatively few attempts had been made to employ this framework of analysis to public bureaucracy and to politics until the beginning of the 1990s. However, this verdict now seems to have been challenged especially in the public choice tradition by several economists and political scientists. This thesis is also a modest attempt to employ the economics of organisation to political institutions. However, this thesis proceeds along an organisation theory track.

In this thesis I am searching for an enhanced understanding of how organisational control is used in political institutions. Specifically, my research question is *how asymmetric information and uncertainty impinge upon performance measurement in political institutions*. As these concepts have been extensively employed both in agency theory, contingency theory and in new institutionalism, and the explanations provided in these three accounts partly differ and partly contradict each other, the research question is pursued by investigating how these three theoretical perspectives may contribute to explain organisational control in political institutions.

Furthermore, this project may compare two competing perspectives on positive political theory and political institutions. As such it may test agency theory and public choice in the economic, rational perspective compared to the historical, sociological perspective. An application of economics of organisation to political institutions makes us able to compare its generalizability regarding organisational control in political

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institutions versus a sociological explanation of symbolic use of organisational control structures in institutionalized environments. Such comparisons highlight different theories potential for generalizations and are in accordance with Scott's (1995) recommendations. An answer to the research question may have contributions to several theories as agency theory, contingency theory, and to new institutionalism. Furthermore, an answer to this research question may contribute to the ongoing work in several disciplines as in accounting, strategy, organisation theory, political science and sociology, and in particular to public management.

Thus, in brief, my overall research project is to question if conventional wisdom from contingency theory and the decoupling proposition of new institutionalism underperform in explaining organisational control, despite its widespread use in textbooks in for instance public sector accounting (Jones and Pendlebury, 1996) and in organisation theory (Hatch, 1997). A clear settling of these issues of how organisational control is used in political institutions, may provide a substantial contribution to organisation theory. However, such a contribution is beyond the capabilities of a single study or thesis. Cf. March and Olsen (1989, 1995) and Donaldson (1995) for three major contributions in this research programme. This thesis therefore is only a modest argument into this research programme.

### OVERVIEW OF THE THESIS

This thesis is organized in seven chapters. In chapter 2 I explain the theoretical framework for the empirical investigation of organisational control in political institutions which I have undertaken in this thesis.

Chapter 3 is a review of the public sector performance measurement literature and the rationale for my empirical study. Here I seek to identify a public sector performance measurement research programme and systematically review experiences with performance measurement actually used in political institutions. Public choice, agency theory and the resource dependence perspective are suggested as the core of a research programme. Drawing on 24 empirical studies reported in scholarly journals in the 1980s and 1990s, it is concluded that performance measurement is a very complex organisational form and permeated with politics. Neither the contingency theory

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conventional wisdom, nor the new institutionalism decoupling proposition provided adequate explanations. However, the resource dependence perspective seems at present to be under-utilised in public management theory.

Chapter 4 is based on the findings of the literature review in chapter 3. In this chapter I develop a conceptual model for explaining use of performance measurement in ambiguous and uncertain contingencies in political institutions. The chapter initially provides a summary of the literature review in chapter 3. The theoretical propositions discussed in chapter 4 offer alternative explanations to symbolic and ceremonial use of information. The result is 10 testable hypotheses revealing the complexity regarding use of performance measurement.

Chapter 5 reports the research design employed in the empirical study. The chapter documents the choice of a cross-sectional, planned variation, population study research design, the selection of local government as setting, the measurement of the variables and the choice of data collection techniques and data sources, and motivates the choice of multiple regression as model estimation. While the conceptual model and hypotheses elaborated on in chapter 4 was a general model, the variables and data in chapter 5 are developed specifically for the research question pursued in this study.

Chapter 6 first provides a description of the 162 Norwegian municipalities which have been chosen as the population of my study. The rest of the chapter presents the results of the data from the Norwegian local government in relation to the hypotheses formulated in chapter 4.

Chapter 7 first provides an overview of the findings. As with all empirical research, there are also limitations and alternative explanations, and these are addressed and assessed. The chapter then goes on with a discussion of the results and identifies implications of the findings for current management theory. The chapter continues with some recommendations for future research, policy and practice. The thesis is rounded off with two thoughts in the closing.

## 2 Theoretical framework

This chapter sketches a theoretical framework where positive theory of political institutions has been applied to local government. First a brief review of economics of organisation in political institutions is presented. Then organisational control in the context of local government is discussed.

### ECONOMICS OF ORGANISATION AND POSITIVE THEORY OF POLITICAL INSTITUTIONS

With *economics of organisation* (economic organisation theories) it is here meant theories that seek to explain organisational performance and effectiveness. This notion of the economics of organisation then encompasses transaction cost analysis, public choice, agency theory, organisational ecology, contingency theory, organisational learning, and the resource dependence perspective. Cf. for instance Cyert and March (1963/1992), Donaldson (1995) and Pfeffer (1997) for recent overviews and reviews of economics of organisation. See Rubin (1992) for a review of public choice and governmental accounting and auditing research. Some scholars also include population ecology in the economics of organisation, however, neither population ecology nor transaction cost analysis will be treated explicitly in this thesis.

The positive theory on political institutions has been divided into two camps (Scott, 1995): The economic, rational choice approach, and the historical, sociological approach. According to Moe (1990) the economic approach to positive political theory stands in sharp contrast to the sociological perspective. The economic, rational choice alternative is based upon microeconomics and public choice. As such it is individualistic

and explains organisations by individual preferences and strategies. Organisations are seen as rational simultaneously as individuals opt for their interests. The methodology of economics is aimed at reducing complexity, identify basic causal forces, and modelling organisational processes as parsimoniously and rigorously as possible.

The historical, sociological stream of new institutionalism has had a strong standing in positive theory on political institutions since the 1970s. This stream of thought has influenced both organisation theory and political science. Core explanations are that organisational actions are not only rational instruments but also garbage can processes (Cohen, March and Olsen, 1972). Structures and decisions are not only chosen for their effectiveness but also for their potential for creating legitimacy by symbolizing the qualities that are valued (March and Olsen, 1989). Structures in political institutions are based on a logic of appropriateness reflecting conceptions of identities rather than based on political action driven by preferences and anticipated uncertain consequences (March and Olsen, 1995). This study will however emphasize the rational and political perspectives on organisational control.

### **Public choice**

The first steps towards a positive political theory (PPT) of institutions, after the Weberian sociological theory of bureaucracy (Weber, 1947), were made by public choice economists in the 1960s before agency theory was launched (Moe, 1984). *Public choice* is defined as the economic study of non-market decision making, or simply as the application of economics to political science, and also as the economic analysis of political institutions (Mueller, 1989). The methodology applied in public choice is economics including assumptions of rational behaviour and utility maximization. Its basic assumption is rational, utility maximisers, often studied in conjunction with opportunism. The presence of opportunism in public sector organisations is a problem in several countries. Spain is plagued with notorious cases of inefficiency and corruption, and in the USA the Congress and the news media periodically bring financial mismanagement and scandals into attention (Olson, Guthrie and Humphrey, 1998). Thus, organisational control in political institutions is not only of academic interest.

Economists had until the 1960s for the most part ignored the economic activity of bureaus and had not provided a positive theory of the supply of bureaus (Niskanen,



1971). As a remedy to this situation, Niskanen proposed the hypothesis that bureaucrats were budget-maximizers. Due to the bureaucrats' asymmetric information on production, the bureaucrats could profit from their information advantage relative to the representatives and demand a larger budget and a bigger output than is socially desirable. Thus, the budget maximization hypothesis predicts a bigger supply and a larger public sector than is desirable judged by social welfare. Migué and Bélanger (1974), in an amendment to Niskanen's (1971) budget-maximizing hypothesis, explained bureau (agency) behaviour as maximizing discretionary budget rather than the budget in itself. Niskanen modelled bureaus as expense centers where the budget was negotiated between the bureau and the sponsor. (In public choice the terms bureau and sponsor are often used instead of agent and principal, respectively.) The bureau provides most of its output to clients who do not have to pay for the services directly. The clients then may have no incentives to compare the cost of the services with the value provided. Furthermore, the bureau may obtain support from clients if the sponsor were to cut down on the budget. The bureau may also threaten to cut in the most valued services rather than in the marginal services in the budget negotiations.

Not only the bureaus may shirk in the budget negotiations due to asymmetric information, also the sponsors may shirk and cooperate with the budget-maximizing bureaus. The representatives in the sponsoring committee may get increased support from their voters or constituencies by an increased or constant bureau output. Therefore the sponsor may also have preferences for a bigger bureau budget or output than is socially desirable. For instance, Zimmerman (1977) in his positive analysis of why municipal accounting in the 1970s was as it was and why attempts at reforms had so little impact, put forward that it was in the politicians' best interest to present annual reports in a highly disorganised fashion in order to force special interest groups incur information processing costs. These shirking or opportunistic behaviour mechanisms may be present and result in a bigger bureau supply and hence larger public sector than is socially optimal. Niskanen's budget-maximizing hypothesis did however not address the management processes internal to the bureaus or the political processes internal to representative government. Furthermore, there seems to have been an over-emphasis on explaining budgeting relative to other organisational systems and processes (Egeberg, 1995), as for instance implementation and performance measurement (Jackson, 1990). As the subject in this study is not the demand and supply of public services itself, but

rather on how bureaucracies and political institutions governs the supply of services, I have elaborated on the economics of organisation perspective which deals with this issue explicitly.

### **Agency theory**

The (new) economics of organisation is a distinctive economic approach and can be characterized by three elements: A contractual perspective, a focus on hierarchical control, and analysis with principal–agent models (Moe, 1984). Core research issues in the economics of organisation have been rewarding, shirking and monitoring. Agency theory is commonly divided into two branches (Jensen, 1983; Eisenhardt, 1989a; Baiman, 1990). The principal–agent theory branch of agency theory commonly employs formal models while the positive agency theory branch usually conducts more empirical studies. While much of the research and writings in agency theory has been about firms, the theoretical foundations are general in nature. The logic in agency theory is about those who have a legitimate right to control an organisation and those decision-makers who in fact make most of the important decisions (Moe, 1984). The economics of organisation has therefore centered on concepts as asymmetric information and uncertainty, why this may exist and what outcomes it may foster, and how unwanted consequences could be avoided or losses reduced. These relationships between principals and agents may be applicable both to for-profit organisations as for government and not-for-profit organisations. Organisations in which important decision agents do not necessarily bear a close share of the outcome of their decisions include both corporations, large professional partnerships, financial mutuals, and non-profits (Fama and Jensen, 1983). All of these types of organisations have therefore been deemed as relevant for agency theory analysis.

In agency theory monitoring is used to denote measuring of output performance, apportioning rewards, observing input behaviour of inputs as means of detecting or estimating marginal productivity and giving assignments or instructions thereupon, including authority to terminate or revise contracts (Alchian and Demsetz, 1972). In agency relationships under uncertainty and asymmetric information, it could be rational both for the principal to monitor the agent, and for the agent to bond his or her expenditures, in order to minimize the residual (welfare) loss (Jensen and Meckling,

1976). The problem is that the sponsors or principals do not know the activities, efforts, output or slack in the organisation. On the other side, also the bureaucrats or agents do not necessarily always know who the ruling coalition is, its preferences or its resources, or the 'true' prices of the bureau. *Monitoring* has been defined as measurement of the performance of decision agents and implementation of rewards. *Implementation* is defined as execution of ratified decisions (Fama and Jensen, 1983). Thus, performance measurement is part of formal control structures which are used in monitoring in order to facilitate implementation.

Worsham, Eisner and Ringquist (1997) critically assessed the assumptions of agency theory as it was imported into the bureaucratic politics literature. They found that the implementation theory (the subsystem literature) seemed to have been almost entirely ignored by agency theorists. Agency theory was subject to an overly hierarchic notion, reminiscent of the early top-down studies of implementation. This view overlooked that different agents may be assigned to different coalitions based on interests. To include implementation issues could have solved the agency theory literature's ahistoric and noncontextual nature. *Ahistorical* means that studies fail to incorporate long enough time frame to recognize cumulative effects of past events on the time period under study. At least a decade was suggested as proper time period for understanding the complexities involved in studies of public policy implementation. *Noncontextual* means that many studies do not locate the study within a larger social, political, and economic context. Worsham, Eisner and Ringquist (1997) supported Moe's (1991) claim that the economics of organisation, and notably agency theory, should emphasize politics and context relatively more, a view also shared by Perrow (1986). Information should be treated as a variable that varies over time and across policy areas. Unfortunately, this appreciation of enhancing the relevance of the economics of organisation in the context of political institutions also comes at a cost of increased complexity and unpredictability.

### **Organisation ecology**

The organisation ecology perspective (Alchian, 1950; Nelson and Winter, 1982) proposes a system-level theory based on variation and selection in order to explain organisations and economic systems under uncertainty. The assumption of profit

maximizing from the classical theory of the firm is rejected and it is argued that organisations well suited to particular environments would survive while the other organisations would fail and disappear. This means that certain organisational structures, leadership styles or other organisational characteristics may explain why some organisations survive or are perceived as effective. This selection is not necessarily planned. Furthermore, the outcome is not necessarily optimal as the initial variation may not have been total and the selections often are decisions.

### **Contingency theory**

Contingency theory is based on the premise that there is no organisational structure or system which applies equally well to all organisations in all circumstances. Thompson (1967) stated that in a stable environment, acceptable performance in the past could be taken as evidence of preparedness for the future. However, lacking absolute criteria of fitness, and being unable to assume that improvement over its past capability is a reflection of its future, the complex organisation then turns to social references to demonstrate that it is doing as well as, or better than, others in its league. *Complex organisations* are defined as open systems, hence indeterminate and faced with uncertainty, but at the same time as subject to criteria of rationality and hence needing determinateness and certainty (Thompson, 1967). Examples of complex organisations were manufacturing firms, hospitals, schools, armies and community agencies, and in this respect local government should be a valid context for studying complex organisations. The definition of complex organisations and the use of social reference under uncertainty, highlights the relevance of performance measurement and benchmarking under such contingencies.

Social references may take many forms, for instance by search and surveillance. *Problemistic search* was defined as search that is stimulated by a problem and directed toward finding a solution to that problem (Cyert and March, 1963/1992). However, Thompson (1967) also conceived of the possibility that monitoring behaviour could scan the environment for opportunities, which does not wait to be activated by a problem and which does not therefore stop when a problem solution has been found. Such monitoring was referred to as *opportunistic surveillance* (not to be confused with opportunism), and it was suggested that it was the organisational counterpart to curiosity

in the individual. Opportunistic surveillance, if it is found, should be associated with the institutional level of the organisation, according to Thompson's (1967) reasoning. Thus, performance measurement is likely to be employed more by management than by street level bureaucrats.

### **Organisational learning**

The issue of performance measurement and organisational uncertainty and ambiguity has also been addressed in the organisational learning literature. *Organisational learning* has been defined as processing of information which changes an entity's range of potential behaviour (Huber, 1991). In fact, the organisational learning literature is the only contribution to organisational control which has come up with a definition of performance measurement. *Monitoring* (i.e. performance measurement) was defined as both focused and wide-ranging sensing of the organisation's effectiveness in fulfilling its own pre-established goals or the requirements of stakeholders (Huber, 1991). A central concept in organisational learning, and an important tool in organisation control, is standard operating procedures. *Standard operating procedures* (SOPs) are learned behaviour and are the memory of organisations (Cyert and March, 1963/1992). In intentional organisational learning, actions are taken both for learning from history and for learning from the experience of others to encode inferences into routines. As there are many fallacies in organisational learning (superstitious learning, competency traps, information overload), the learning needs to be compared with other serious alternatives (Levitt and March, 1988). Performance measurement may play a significant role in these processes of learning. Huber (1991) judged performance measurement to be one of the clearest and most pervasive forms of organisational search, but asserted that relatively little was known about the details by which organisational experience was accumulated into structures of routines. Levitt and March (1988) argued that performance measurement was a process that yielded different kinds of routines in different situations, but that it was only partly successful in imposing internal consistency on organisational memories. Politics has already been proposed as one explanation to this phenomenon, and this perspective has also been put forward by Olsen and Peters (1996) for understanding organisational learning and public sector reforms. They argued that there is a long way to go before an adequate understanding of the role of experiential

learning in reforms in political life is available. The enhancement of quality and efficiency in institutional design of the common good should be studied in conjunction with political pressure and interference. Politics will therefore be considered in some greater detail next.

### **The resource dependence perspective**

Information may be important both for performing tasks in the technical core and for formation and sustaining coalitions in order to reduce environmental uncertainty and sustain legitimacy and resources. *Information systems* has been conceptualised as the reports, statistics, facts, or information that are regularly collected and their pattern of transmission through the organisation (Pfeffer and Salancik, 1978). Pfeffer and Salancik argued that the fact that certain information is regularly collected, focuses the organisation's attention to it. The fact that information exists and is prominent through the resources it consumes and attention it demands, conveys the impression that the information is important. New entrants into the organisation may then start to construct their perceptions of the organisation and its problems around the available information. The information may in this way provide organisational memory and enhance the development of SOPs. Factors affecting information collection in organisations were assumed to be ease of collecting the information, ease of processing the information, necessity of the information, and how critical the monitored activity was for the operations. The information may affect behaviour through its utility for decision making by reducing uncertainty, enhance stakeholder interests, and screen out information to protect the organisation's operations from external influences. However, as it takes time to build new information structures, also the information structures that exist are guarded by the departments representing them. Thus, according to the resource dependence perspective one should assume that performance measurement could comprise a substantial part of both the information systems and the politics in public sector organisations.

### ORGANISATIONAL CONTROL IN THE CONTEXT OF LOCAL GOVERNMENT

This thesis studies organisational control in political institutions, hence organisational control in firms is only briefly discussed. According to Cyert and March (1963/1992), there is nothing intrinsically more repetitious or quantifiable about economic decisions in firms than in other organisations. The differences between decision making in firms relative to say political institutions lie almost entirely in our habitual ways of thinking about them. On the other hand, Moe (1984) argued that the transition from economics to politics is by no means straightforward. These two contrasting views illustrate that some elaboration on the application of the economics of organisation on political institutions may be warranted. Hence, in this introductory section of my study, organisational control in firms and political institutions is somewhat more elaborated on. This is done to give the reader who is unfamiliar with organisational control in either firms, in political institutions, or in both, a better grip with the research context, and to identify some of the small peculiarities of decision making in local government.

Political institutions serve two different purposes. On the one hand, political institutions solve collective action problems which allow actors to cooperate in the realization of gains from trade. On the other hand, political institutions are instruments for coercion and redistribution, and this has been the neglected side of the story of political institutions (Moe, 1990). The economics of organisation has primarily dealt with voluntarily exchange among autonomous actors. However, political institutions arise from the politics of structural choice. This means that structures, as organisational control in political institutions, also must be understood in terms of politics and not only symbolism. If the economics of organisation is to contribute to an understanding of political institutions, then the positive political theory must incorporate what politics is about. Thus, the economics of organisation must be transformed into a political theory along several dimensions. These dimensions are public authority, political uncertainty and protective structures, compromise, and public sector effectiveness (Moe, 1991). In addition, a fifth and a sixth dimension, property rights and transparency, have been included.

### **Public authority**

In agency theory effective organisation is dealt with in hierarchical control through two issues simultaneously. The first issue is to let the agency work on the tasks it is supposed to do, which is the issue of effectiveness. The second issue is to ensure that the agency is doing the tasks as efficiently as possible. The organisational control problem in political institutions, where market competition is unavailable as additional organisational control, is then that agents can do more or other tasks than desired such that effectiveness and equity is reduced, and agents can shirk such that inefficiency emerges and hence effectiveness and equity are also reduced.

Agency theory usually employs the term 'residual' when organisational control in firms is analyzed. The *residual* is the difference between the firm's stochastic inflow of resources (income) and the promised payments to the agents (Fama and Jensen, 1983). Organisational control can be enhanced by letting the agents share some of the residual in payment which means that the agents also have a stake in the same outcome as the principal pursue. Political institutions, on the other hand, usually have no financial residual. The budget is to be balanced against the expenses, and the residual, the net benefit, is often directed to constituencies who do not pay marginal prices.

The non-presence of financial residual claims may increase slack in political institutions relative to firms, all other things equal. *Slack* may be explained as the difference between the minimum costs for providing some amount of service, and the amount the agents and bureaus actually use in providing the service. Slack consists of payments to coalition members in excess of what is required to maintain the organisation (Cyert and March, 1963/1992). This slack may be used to compensate stakeholders for their policy support, subordinates for their compliance, extended quality and new equipment, or as personal consumption or 'on the job consumption' (Niskanen, 1971). Slack is then only possible if inefficiency exist. However, slack may also function to enhance long run effectiveness as means of energy for innovation, and buffer against uncertainty and conflict. This slack also gives the agency or bureau head an incentive to monitor member or team member behaviour because it is this slack which may enhance his capacity for control. While agency heads in firms and bureau heads in political institutions may both want to control the slack, the additional organisational control through the financial residual mechanism is not available in



political institutions. Though political institutions may rely on a high spirit and competence acquired through rigid recruitment of the most compliant candidates in clan control, and by formal and informal training and rules as the classical Weberian theory of bureaucracy in behaviour control, these are also options for firms. Therefore, the presence of slack is similar both in firms and in political institutions, but firms have financial residual claims as additional organisational control while political institutions have not. Performance measurement may on this reason be relatively more important in political institutions than in firms because interest groups may compete for the residual claims on the net benefits. This puts forward a partial explanation to why public sector seems to have provided the leading edge on performance measurement issues, as Lapsley and Mitchell (1996) argued.

In firms the principal, who may be the entrepreneur or the owner, has preferences for the residual. The principal may hire an agent who may also wish to hire more agents for himself. In political institutions there also exist multiple principal-agent relationships. An *agency relationship* is defined as a contract under which one or more persons, the principal(s), engage another person, the agent, to perform some service on their behalf which involves delegating some decisionmaking authority to the agent (Jensen and Meckling, 1976). The voter, on behalf of all living and unborn citizens, is principal to the representative. The representative may have preferences for re-election and political support, but is to represent the differences in the voter population. The representatives are principal to the bureau, and the bureau itself may contain several principal-agent relationships. For instance, in local government the mayor on behalf of the representatives, has the daily dealings with the municipal chief administrative officer. This turns the representatives into principals relative to the bureaucracy. The chief administrative officer on his side turns into principal relative to his subordinate bureaucrats as agents, and the bureaucrats may function as principals relative to their subordinates, and so on. Thus, organisational control in political institutions viewed as principal-agency relationships, is at least as and maybe more complex than organisational control in firms.

### **Political uncertainty and protective structures**

The exercise of public authority is threatened by political uncertainty. The ruling

coalition or parties do want the bureaucracies and agencies to be effective. At the same time they also know that they can lose control to other coalitions or parties. A trait with organisational control in political institutions compared to firms, is that the politicians play the entrepreneurial role, but they have no guaranteed property rights. Design of political organisational control in political institutions must then make a trade-off between effectiveness and control. Again, one may find a similar mechanism of uncertainty regarding authority in firms, as different stakeholders may compete for the residual and authority to control. Recall for instance the finance strategy of using 'poison pills' as defense against hostile takeovers. Where the chief financial executive in a firm has to deal with the board of directors, the shareholders, employees and environmental groups, a municipal chief administrative officer has to deal with the municipal council, the inhabitants, employees, and different interest groups. However, the political uncertainty may be at least as evident in political institutions as it is in firms, and maybe also even more so.

Because of political uncertainty, the politicians have designed a complex web of different constraints on how political institutions are controlled to insulate the instruments of political institutions from political enemies. Such protective structures may be laws and rules governed by different bodies. In agency theory *common agency* is used to denote the situation where an agent relates to several principals, or what Meyer (1979) denoted as a situation where public officials serve dual masters. This also means that political institutions often are subject to multiple principals at the same time, and maybe in a wider extent than firms are.

Political uncertainty, besides leading to the common agency phenomenon, also leads to another aspect of organisational control in political institutions. As political control is imperfect due to guards against political enemies, it also means that the bureaucrats in political institutions could be more autonomous relative to the politicians than the agents in the firms relative to their owners. This makes budget-maximizing behaviour more likely and also performance measurement relatively more important in political institutions than in firms.

### **Political compromise**

Politics is related to negotiating, log-rolling, and compromising. In the boards of firms,

one may assume that compromising is as common as in municipal councils. However, representative democracies do not build upon a single ideology or one preference function and moreover often work through complex structures as through councils supported by special committees seeking consensus or compromises. In such complex governance structures there may be coalitions between the sponsors and the bureau which amplify the initial problem of budget- or slack maximizing. For instance, a political committee or a municipal council may be constituted by a relatively large share of public sector employees (Sørensen, 1995). These representatives may act in league with the bureaucrats in order to increase the budget and output which then may become larger than socially desirable. Thus, not only the agents can shirk, also the principals can shirk.

Politics is not only constituted by compromise and win-win situations, it also encompasses conflicts, coercion and redistribution. This has been the theoretical domain of welfare theory. Therefore, some basic insights from welfare theory shall be briefly recapitulated. Ideally, one could wish that any actions would increase welfare and harm no-one. The concept of Pareto-optimality is widely used both in economics and politics to denote such issues. A *Pareto-optimum* is defined as a position from which it is impossible to improve anyone's welfare, in the sense of moving him to a position that he prefers, by transforming goods and services through production or exchange without impairing someone else's welfare (Blaug, 1985). Pareto-improvements are the actions and outcomes which leave someone better off and no-one worse off. However, public sector is often designed to settle conflicts and implement redistributions. Therefore an explicit appreciation of the conflict dimension of politics is warranted. The Kaldor-Hicks optimality concept does this. A *Kaldor-Hicks improvement* is defined as where the total gain in welfare from certain actions or outcomes is such that the winners could compensate the losers (Wildavsky, 1966; Blaug, 1980, 1985). However, the compensation does not actually have to be paid, and this is what makes the Kaldor-Hicks criterion so intriguing for students of political institutions.

The now termed Pareto and Kaldor-Hicks criteria were both published in the early 20th century. Vilfredo Pareto published the *Manual of Political Economy* in 1906 where he decisively broke away from traditional practice of using cardinal utility and additive utility functions and only restricted himself to welfare conclusions that did not depend on interpersonal comparisons. Enrico Barone introduced the notion of compensating

payment in an article in 1908, but this was not translated into English until 1935. The notion is now commonly attributed to John Hicks and Nicholas Kaldor who revived the concept on compensating payment in the 1930s. However, the Kaldor-Hicks criterion and the notion of compensating payments seem to be less known today than the Pareto criterion outside the welfare theory and policy analysis fields. Nevertheless, the Kaldor-Hicks criterion may be useful to students of organisational control in political institutions. (For a more thorough treatment of the Kaldor-Hicks optimality criterion, see Blaug (1980, 1985) with bibliography.)

Moe (1991) called for a theory of politics and economic organisation. The Pareto criterion deals with given distribution of initial resources, gains and compromises. The Kaldor-Hicks criterion in addition deals with conflicts, coercion and redistribution, if the potential of compensation is not released. Pareto optimality is a subcategory of Kaldor-Hicks optimality. Both the economics of organisations and the positive theory of political institutions should not be limited to a narrow approach to optimality unless the gain in parsimony outweighs the loss in explanation and prediction. Thus, the Kaldor-Hicks criterion seems to be the dimension, or the neglected story of political institutions as instruments for coercion and redistribution, which Moe (1991) called for to introduce into positive political theories, in addition to the Pareto criterion already commonly employed in the economics of organisation. Nevertheless, welfare theory has not been able to specify an objective welfare function, and efficiency is inseparable from the question of equity. The Pareto criterion takes an initial distribution of resources for granted, while many political institutions exist in order to alter the distribution of resources. This means that it may be misleading to describe economics as essentially about voluntary or value free exchange which then presumably is grounded on a value free Pareto optimality, and politics as essentially being about inherently coercive exercise of public authority, because the Pareto criterion is encompassed by the Kaldor-Hicks criterion. Blaug (1985) summarised his retrospect on welfare economics with stating that efficiency questions still appear to be inseparable from equity questions. However, there is still much merit in using economics to draw attention to the trade-off between efficiency and equity because apparently few other than economists will do so.

The Kaldor-Hicks criterion seems to provide a bridge between the commonly used Pareto criterion for judging economic optimality in free exchanges, and a more relevant criterion for judging economic optimality when redistribution and coercion is to take

place or be considered. Thus, it seems to be potentially fruitful, both for students of political institutions and for students of organisational control, to appreciate the lesson of Kaldor-Hicks optimality from welfare economics when the economics of organisation is to be transformed into a positive theory of political institutions.

### **Public organisation effectiveness**

A firm which is not run effectively may become a candidate for takeover. This threat is part of the firm's organisational control structure through the market, in addition to internal contracts and performance measurement. Political institutions are not subject to organisational control due to claims on financial residual slack but on claims on net benefit. Furthermore, service suppliers in the public sector are not subject to forces of selection based on economic efficiency alone because also social equity is considered. Though cost efficiency is not the only criterion for judging the performance of political institutions, also political institutions face external threats which may enhance organisational control in line with the mechanism present in the take-over threats for firms, albeit not from financial residual claims. This mechanism goes like this: If political institutions are not efficient and legitimate, they may be reorganized, merged with neighbour authorities, or privatized. A new management may be appointed, and the organisation could be trimmed. An entire governmental level of authorities may be made superfluous and their tasks split between the authorities on the levels above and below, and certain sectors or services may be contracted or privatized all together. This means that external threats are present also for political institutions, but probably less so, and maybe also less frequent, than for firms. Thus, performance measurement may serve as a means to reassure efficiency and legitimacy.

### **Property rights**

With private property rights, as ownership of shares in public traded firms, the stockowners may have a strong monitoring device through concentration and capitalization because the monitoring costs then could be small relative to the gains. *Concentration* means that someone can buy a large share of the stocks. *Capitalization* means that all decisions affecting future consequences, assuming perfect information,

instantly are discounted into present values which are marketable. With public property rights there are often restrictions on the assets, and claims are often not for sale. The substantially higher transactions costs of the real estate market, as opposed to the capital markets, and the greater difficulty of concentrating ownership in local governments, generally reduce the incentives of individuals to monitor elected officials (Zimmerman, 1977). Ownership claims could on the other hand be concentrated also with public property rights through forming coalitions. This strategy may nevertheless have substantial coalition costs which may dilute the incentives to monitor the local government and its public officials. Thus, concentration is no self-evident incentive for monitoring. Moreover, capitalization is often not affecting the personal wealth of the voters as principals directly, or such consequences are affecting only some groups and in different directions. This means also that the incentive for the principal to monitor the agent is reduced in municipalities where concentration and capitalization of public property rights are small compared to private property rights, as in firms.

Although public property rights through lack of concentration and capitalization may reduce the principals' incentives to monitor the politicians or the local government, there may also be demand for monitoring from other groups than the principals (Zimmerman, 1977). Potential political candidates may demand monitoring in competition for scarce or misheld representative positions. Bureaucrats may demand information for doing their job. Furthermore, also the press may demand information in their mediation role between local government, legislators and voters. This brings us to the next point on transparency.

### **Transparency**

In firms, management may want to hide their strategies, decisions and organisational structures in order to sustain a competitive advantage. Cyert and March (1963/1992) argued that differences between decision making in firms and in political institutions may stem from the extended isolated social life of firms from other organisations which leads to differences in behaviour simply through learning where acceptable solutions are not unique. In political institutions transparency and interaction with environments more often is the rule than secrecy and isolation. Transparency is a fundamental dimension of democracy and is also important for political competition to take place. Without

## Chapter 2: Theoretical framework

transparency a public sector organisation may lose legitimacy and hence both public moral support and resources could wither. In the 1990s the information technology has made public disclosure of information as performance indicators (PIs) and statistics feasible with short delays in time and with simultaneous access also for users outside the organisation. This means that the traditional distinction between internal and external reporting, for instance as found in financial accounting, is less applicable and of relatively less relevance in local government management.

### SUMMARY

To sum up, there are several identical organisational control problems in firms and political institutions only varying in degrees, and also some distinct control problems in political institutions. The common problems are asymmetric information, uncertainty and slack. The possibly distinct control problems in political institutions are public property rights and the presence of relatively more multiple principal–agency relationships (common agency), relatively more protective structures, more coercion and redistribution, and more transparency. However, by applying welfare theory together with economics of organisation, one may proceed with a positive, political theory of institutions which also deals with politics explicitly.

In this chapter I have elaborated on organisational control in political institutions in general. I have found that many themes are similar between firms and government. At the same time, when it comes to details, some aspects are different also. However, much of the classical literature on organisational control has also addressed public sector management. Thus, there is a rich literature on public sector management, and the next chapter documents that this is also the case on the issue of empirical studies of public sector performance measurement. Chapter 3 therefore goes on with a systematic review of this literature on public sector performance measurement, with an emphasis on explaining how and why performance measurement is used under contingencies of asymmetric information, uncertainty, ambiguity, and politics.

## 3 Literature review

The purpose of this chapter is to identify a public sector performance measurement research programme and enhance our understanding of how and why performance measurement is used as organisational control in political institutions. The research questions pursued are: What are the potential costs and benefits of public sector performance measurement? What are the obstacles to achieve these benefits? The focus is on performance measurement as organisational control in the political context in which it operates (Hopwood, 1983).

The management literature is now abundant with both scholars' and practitioners' opinions and experiences with public sector performance measurement after the last decades' proliferation of PIs. However, there seems to be lacking a coherent public sector performance measurement research programme, agreement on concepts explaining the use of PIs, and systematic reviews of empirical studies where the public sector experiences have been put into a coherent framework. This literature review aims at contributing to the organisation theory literature by addressing these issues, extending the 'performance paradox' framework proposed by Meyer and Gupta (1994) where organisational control is maintained by not knowing exactly what performance is. A more elaborated knowledge base of public sector performance measurement may provide insights not only into the matter of organisational control in political institutions, but also on complex organisational forms in general.

Many scholars have participated both in research and development on the use of PIs as organisational control in the public sector. Scholars have warned against uncritical use of private sector inspired management in a public sector context (van Gunsteren, 1976). Still, predecessors of performance measurement, cost-benefit analysis and policy analysis, were recommended by public administration experts for use in political



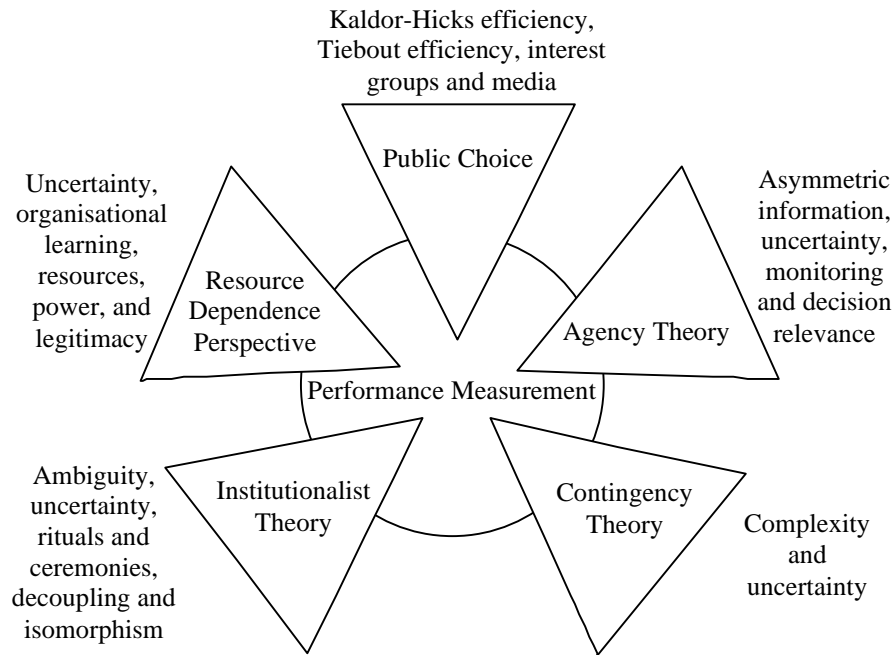
### Chapter 3: Literature review

institutions despite frequent problems as scarcity of planning competence, lack of a common terminology, presence of uncertainty, and considerations of political rationality together with economic rationality (Wildavsky, 1966). Among practitioners the situation is as diverse as among the scholars. From UK local authorities Ball and Monaghan (1996) reported that there was a strong view expressed that the implementation and use of performance measurement review systems had been successful, the politicians more strongly than managers. From US city governments Ammons (1995) reported that PIs existed but could be utilised more. Independent reviews of performance measurement in the US suggested slow and partial implementation despite sustained efforts by the executive branch under the Government Performance and Results act of 1993 (Picciotto, 1999). The above sketched controversies suggest that both scholars and practitioners may profit from a deeper understanding of the functions of performance measurement in the public sector. Cf. also Mellemvik, Monsen and Olson (1988) on the diverse functions of accounting.

Already in the 1930s Clarence E. Ridley and Herbert A. Simon studied efficiency in measuring municipal activities (Simon, 1947/1997). Performance measurement, value for money (VFM) auditing and evaluations have been utilised in the public sector at least since the 1950s (Power, 1997). Since the 1980s there has been a growing interest in performance measurement also in the private sector (e.g. Johnson and Kaplan, 1987; Camp, 1989; Kaplan and Norton, 1996). However, the public sector performance measurement literature is already extensive. Furthermore, public sector performance measurement has provided the leading edge on performance measurement issues (Lapsley and Mitchell, 1996). The private sector performance measurement literature is therefore not reviewed in this study.

The rest of this chapter is outlined as follows. In the next section a conceptual framework on public sector performance measurement is outlined and public choice, agency theory and the resource dependence perspective are suggested as the core of a public sector performance measurement research programme. In the third section, drawing on 24 empirical studies on public sector performance measurement, benefits of and obstacles to organisational use of performance measurement are discussed. Section four rounds of the review with conclusions and some recommendations for future research.

## Chapter 3: Literature review



**Figure 3.** A multi-theory perspective on public sector performance measurement

### CONCEPTUAL FRAMEWORK

Performance measurement is in the interlocus of several disciplines and perspectives, cf. figure 3. This calls for a multi-theory approach. A multi-theory approach may give a richer and more valid explanation of performance measurement than a partial approach can do say by using agency theory only. A multi-theory review may also highlight the potential bias inherent in some theoretical perspectives, reveal ‘white spots’ in the academic landscape, and address the need for future research.

There are many candidate contributions to the core of a public sector performance measurement research programme. Ridgway (1956) utilised both organisational theory and the Soviet (central planning) literature and identified many dysfunctional consequences of performance measurement, a topic Smith (1993, 1995) more recently has elaborated further in the public sector context. Tiebout (1956) revealed that citizens ‘vote with their feet’ according to preferences, and therefore that governments pursuing social welfare could facilitate competition resulting in different performance between local authorities. Thus, best practice in for instance one municipality is not

unequivocally the best practice for other municipalities. Due to asymmetric information, politicians may want to monitor a bureau in order to avoid strategic behaviour. On the other hand, monitoring could be costly. However, even imperfect monitoring may reduce the bureau's ability to deceive the legislature (Bendor, Taylor and Gaalen, 1985). Another means in organisational control design by the legislators is to let constituency groups, as interest groups, monitor the agencies. The interest groups can then communicate the results directly to the politicians rather than through a formal organisational control system (Banks and Weingast, 1992). The interest groups then bear some of the monitoring costs but they may also have more information than the politicians and furthermore receive benefits of the output directly. This means that performance measurement may have substitutes and complements in interest group behaviour and in media.

Pollitt (1988) highlighted the relevance of quality in public sector performance measurement, distinguishing between a customer, consumer and citizen perspective (the three Cs), on such issues. Pollitt (1986) reminded the public sector management community on the differences between efficiency, effectiveness and equity (the three Es), and warned against a biased emphasis on economy. Many prescriptive or normative approaches tend to overlook equity and power when effectiveness is discussed. Effectiveness and power are not necessarily two mutually exclusive concepts (Rowlinson and Procter, 1997). Wildavsky (1966) addressed the relevance of the Kaldor-Hicks optimality criterion in addition to the Pareto criterion on issues of effectiveness and politics in policy analysis. Politics in the public sector may therefore be studied also with the notion of compensating payments, the Kaldor-Hicks criterion (Blaug, 1980, 1985), and not only with the Pareto criterion. With the Kaldor-Hicks criterion an improvement may be achieved as long as the benefits exceed the costs and the winners can compensate the losers, but without compensating payments actually having to be paid. With the Pareto criterion everybody is left at least as well off after a change as before the change. Performance measurement addresses cost efficiency, allocative efficiency and equity at the same time. On this background one easily understands that performance measurement may be contested with both politics and resistance.

Performance measurement used for reducing or adapting to uncertainty is a crucial notion in the performance measurement research programme. Performance

### Chapter 3: Literature review

measurement is concerned about learning from own and others experience and related to developing and maintaining organisational memory, routines and SOPs. Thus, the core of the public sector performance measurement research programme is constituted to a large extent by public choice, agency theory and organisational learning from the economics of organisation.

Use of performance measurement was found to be inadequately researched from a control strategy and system perspective (Dent, 1990). However, Dent did not undertake any review of studies of control systems in public sector organisations, which may have provided relatively more empirical results than the business strategy and management literature did on this issue. The public management conventional wisdom, contingency theory and symbolism from new institutionalism (Wildavsky, 1986; Meyer and Rowan, 1977; Ouchi, 1979; Hofstede, 1981), has not yet incorporated empirical studies of performance measurement under contingencies of ambiguity and uncertainty, neither as supplement to budget or clan control, nor as component of standardisation, expert, political or clan control. See however Alford and Baird (1997) who found some support for the contingency theory conventional wisdom. Accounting, auditing, surveillance and control issues have been neglected in contingency theory research and are fertile areas for further research (Donaldson, 1995).

Empirical studies on decoupling of organisational control structures other than case studies are few. See however Gupta, Dirsmith and Fogarty (1994). New institutionalism has also been criticised for having considered power issues insufficiently (Moe, 1990; DiMaggio and Powell, 1991). New institutionalist theory may therefore have overlooked the possibility that formal control may enhance compliance and professionalism and thus serve both effectiveness and legitimacy. Furthermore, it is likely that stakeholders in political institutions will resist implementation and use of performance measurement which may cause embarrassment, unless such systems are used for external legitimisation only (Markus and Pfeffer, 1983; Argyris, 1990), or unless there is so much ambiguity that embarrassing information from the performance measurement does not affect the ruling coalition (Baier, March and Sætren, 1986).

## DISCUSSION

In this section, general finds both regarding benefits of, and obstacles to performance measurement are discussed. The discussion is based on 24 empirical studies from the 1980s and 1990s on implementation, use and effects of public sector performance measurement selected from international, English language, scientific journals, cf. table 2. Most of the studies came from UK, but also Australia, the Netherlands, New Zealand, Norway, Sweden and USA were represented.

### **Benefits of performance measurement**

The benefits identified have been categorised according to three organisational perspectives which usually address these issues: Instrumentalism, institutionalism, and politics, cf. table 3. (It is acknowledged that political behaviour is rational behaviour. However, for simplicity and conceptual clarity, I have discriminated between the instrumental and political models as two, distinct perspectives.)

#### *Instrumentalism*

The reinventing government movement and the new public management (NPM), as it is called in Europe, often in a prescriptive or a normative sense, tie performance measurement to improved welfare through enhanced efficiency, effectiveness and equity. Typically benefits associated with the instrumental, cybernetics perspective as found in accounting and agency theory, are enhancing control and accountability, and reducing uncertainty and information asymmetry (e.g. Boyne and Law, 1991; Wholey and Hatry, 1992; Ammons, 1995; Thompson, 1995; Alford and Baird, 1997).

The most important criterion for design and implementation of PIs was found to be decision relevance (Mayston, 1985). A PI should contribute with substantial relevant information for decision making, or it should be discarded to minimise the number of PIs. Furthermore, decision relevance contributes to minimise the costs of gathering, processing and evaluating information. To be useful PIs ought to be employed in a well-defined welfare theory and control framework unless there probably would be substantial problems with validity and reliability.

**Table 2.** Empirical studies of public sector performance measurement

<b>Author</b>	<b>Research problem</b>	<b>Methods</b>	<b>Conclusions</b>
<i>Implementation</i> Mayston (FAM 1985)	Decision makers' information needs and appropriate design of non-profit PIs	Exploratory study: Content analysis of 15 UK nationalised industries' annual reports, and theoretical analysis	PIs can be placed in a decision framework based on welfare theory, and many accounting concepts can be extended to performance concepts
Likierman (PMM 1993)	How public sector managers implement and use PIs	Discussion and written feedback from over 500 UK middle and senior public sector managers	20 lessons from experience may enhance use of PIs, especially conceptual validity applied to the political context, bottom-up participation, patience and pragmatic use
Midwinter (PMM 1994)	Development of PIs and value for money (VFM) auditing in local government	Content analysis of VFM reports from Scottish local authorities	The state of the art was primitive and fraught with methodological problems. PIs were inadequate for inter-authority comparisons. However, the statistics could be of use for internal policy analysis assisting the councils
Hall and Rimmer (AJPA 1994)	Implementation of PIs in monitoring of contractual performance	Content analysis of a study on 38 UK local authorities	PIs were only modestly introduced prior to contracting following compulsory competitive tendering in 1988. This makes it difficult to measure impact of contracting on service quality
Nyhan and Marlowe (PPMR 1995)	Design and reporting of performance measures consistent with TQM	Case study of a division of 4000+ employee US government agency	Performance measurement can be combined with TQM given training of work groups and managers, top-management commitment, and linkages between performance and rewards
Ball and Monaghan (LGS 1996)	Major study of local authorities implementation and use of performance review systems	Survey of all chief executive and council leaders in local authorities in the UK (514 boroughs, regions, districts, counties, metropolitan and non-metropolitan districts). Follow-up interviews in 28 authorities which showed significant progress	Half of all local authorities were assumed to operate a review mechanism and a majority implemented their review system after 1988. Type of political control (ruling party) did not seem to influence the choice. Most people would subscribe to the view that the system could only be effective if linked to the authority's planning and budgetary system. There was a strong view expressed that the system had been successful, the politicians more strongly than managers
Helden (FAM 1998)	Critical review on Dutch implementation of performance measurement	Case study of a Dutch project encompassing 12 pioneer municipalities 1988–95	Dutch municipalities have been exposed to reduced budgets for over 15 years, and this may explain some of the adoption of instrumental organisational control models. Need for more behavioural research on implementation and about variables explaining different applications
Johnsen (FAM 1999)	How decoupling affects implementation of performance measurement	Case study of 4 municipal projects in Norwegian local government 1983–98	An implementation mode where PIs are loosely coupled to organisational objectives, may overcome resistance and further implementation success. Need for research on implementation structure

### Chapter 3: Literature review

(Table 2 continued.)

<b>Author</b>	<b>Research problem</b>	<b>Methods</b>	<b>Conclusions</b>
<i>Use</i> Carter (PA 1991)	How design and implementation affect use of performance measurement	Comparative study of 13 UK government departments, public agencies and private businesses in the 1980s	Performance measurement is used as organisational learning. Mature performance measurement models are designed, parsimonious and timely. Design and use would have been easier if both quality and consumer satisfaction was regarded as aspects of process. Quality is part of efficiency and not its conceptual antithesis. Problems transcend the private and public sector division, but PIs can be used as democratic instruments in the public sector
Carter and Greer (PA 1993)	What roles PIs have in the Next Steps initiative	Content analysis of business plans of 4 UK agencies formed by the Department of Social Security	The agencies have responded to the requirement of the Next Steps programme by developing reliable and usable PIs. PIs are political instruments mediating the Department and the agencies by means of exercising 'hands-off' control and holding agencies accountable. The use of PIs were also changing from 'tin-openers' to more use of 'dials' because PIs were increasingly linked to objectives
Palmer (PMM 1993)	How local government measure and use performance information	Survey data of UK local government collected by 308 questionnaires. Comparison of existing systems in education, social services, highways, housing and refuse collection to an ideal system.	PIs most frequently used were related to costs, volume of service, utilisation rates, time targets and productivity. PIs least used were quality of service, customer satisfaction, and achievement of goals
Sørensen (IRAS 1994)	Use of performance measurement and non-marginal evaluation	Survey of agency heads in Norwegian local government 1990/1991	53% of the municipalities reported to apply performance evaluation, but only 15% were estimated to provide quantitative measures of productivity
Ammons (PAR 1995)	Explore the availability of standards relevant to local government functions and how performance reporting could be meaningful in cross-jurisdictional comparisons	Content analysis of budgets, annual reports and selected documents for libraries and leisure services, specifically parks and recreation, in 97 US city government	Relevant standards and actual performance figures suitable for comparative purposes existed. This could be utilised more to capture media and citizen attention in order to enhance accountability
Hyndman and Anderson (FAM 1995)	How performance reporting contributes to accountability by agencies according to the Next Steps objective	Content analysis and comparisons of the first 57 UK Next Steps agencies' 1991/92 relative to the 1988/89–1990/91 annual reports	Although there was an improvement, a significant proportion of the agencies reported little or no information on efficiency and effectiveness. There was an enhanced emphasis on reporting quality and effectiveness

### Chapter 3: Literature review

(Table 2 continued.)

<b>Author</b>	<b>Research problem</b>	<b>Methods</b>	<b>Conclusions</b>
Haselbekke (PMM 1995)	Use of public policy and performance measurement in the Netherlands	Content analysis of Dutch central and local government budget memorandums 1995	The amount of published data on various parts of the production process, both input, activity and output, had grown rapidly in the last years. Local governments had achieved better results in performance measurement than central government, but there was still a striking lack of productivity information at both levels of government
Thompson (FAM 1995)	Review of service performance reporting in New Zealand local authorities	Content analysis of annual reports of service performance of 11 public art galleries the second year after implementation of service reporting in 1990	Performance measures adopted addressed objectives inappropriately and incompletely. The finding pointed to a need for improved reporting of local authorities activities
Alford and Baird (PMM 1997)	Applicability of public sector performance monitoring	Content analysis of programme performance statements of 17 Australian central government departments and agencies 1991–92 and 1992–93	Performance monitoring was contingent on ambiguity ('difficulties in defining or measuring ends'), and uncertainty ('difficulties concerning means')
Boyne (LGS 1997)	Evaluation of the extent to which the UK Citizen's Charter Indicators (CCIs) published by the Audit Commission can be used to make meaningful comparisons of performance between local councils	Content analysis and theoretical analysis of validity, and statistical analysis of PIs for 39 English non-metropolitan counties, 8 Welsh counties, 32 London boroughs, 36 metropolitan districts, 296 English non-metropolitan districts, and 37 Welsh districts	PIs were not comprehensive regarding conceptual criteria for performance as equity, public participation, and responsiveness to local preferences. Effectiveness issues were completely ignored. Nevertheless, a small set of variables may be used on some dimensions of performance. However, some of the differences in service coverage, quality, speed of response, efficiency, service utilisation and administrative effectiveness, were beyond the control of individual councils. The Audit Commission should be clearer on validity and local circumstances regarding reliability
Ballantine, Brignall and Modell (MAR 1998)	Comparison of UK and Swedish performance measurement	Case study of UK and Swedish public health service practice	There were tensions when trying to balance the provision and use of financial and non-financial information. The decentralised approach in Sweden led to a more balanced approach to performance measurement than the centralised approach adopted in the UK



### Chapter 3: Literature review

(Table 2 continued.)

<b>Author</b>	<b>Research problem</b>	<b>Methods</b>	<b>Conclusions</b>
Edwards (LGS 1998)	The impact of the Citizen Charter Indicators (CCIs) on the activities of one consumer group	UK single case study	The division of the interest group (a national campaign for more and better public conveniences), energies and resources on the annual CCI exercise drew the group's campaigning teeth. Because of lack of technical expertise about PIs, consumer groups can make errors of interpretation and draw false conclusions which may undermine their credibility and thus undermine their campaigns. Far from empowering consumer groups, the production of the Audit Commission's PIs for local authorities may have the opposite effect of disempowering
<i>Effects</i>			
Smith (FAM 1988)	How recommendation of publishing PIs in annual reports affects variation in efficiency through competition	Content analysis and analysis of variance of PIs from 115 English and Welsh local authorities annual reports 1981/82–1984/85	The results showed no increased competition. If competition was present in local government performance, it was likely to be peer group pressure and to a lesser extent political control (ruling party). However, there were inadequate output measures and arbitrary numbers of PIs on the services
Boyne and Law (FAM 1991)	How annual reports promote accountability to the public	Content analysis of 11–30 Welsh district council annual reports each year from 1981/82 to 1988/89, interviews of council staff, and statistical analysis	The annual reports contained little to assist judgements on councils' performance. Accountability could be enhanced by central government issued codes of guidance, and by councils placing their reports more directly into the local political debate
Smith (BJM 1993)	Impact of publication of outcome-related PIs	Case study in UK National Health Service	Reliance on PI schemes may have dysfunctional consequences. Attention should be given to managerial incentives implicit in PI schemes
Boyne (PMM 1996)	Effect of scale on performance in local government reorganisation as district mergers	Correlation analysis of 263–296 UK local government services in non-metropolitan districts	Performance in service provision as quality, efficiency and administrative effectiveness, is associated with scale, but scale and performance must be measured with appropriate measures. Development of performance measurement has provided more appropriate measures for local government reorganisation decisions than before

*Note.* AJPA = Australian Journal of Public Administration, BJM = British Journal of Management, FAM = Financial Accountability and Management, IRAS = International Review of Administrative Sciences, LGS = Local Government Studies, MAR = Management Accounting Research, PA = Public Administration, PAR = Public Administration Review, PMM = Public Money and Management, PPMR = Public Productivity and Management Review.

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*Hands-off control* was used to denote the usage of PIs in the paradox of the UK conservative administration that reducing the role of central government required tighter central control (Carter, 1989). In the Netherlands the public sector had been exposed to reduced budgets since the early 1980s, and especially the local government had developed and achieved results in performance measurement (Haselbekke, 1995; Helden, 1998). PIs may be used as signals and 'dial' (point to) whose responsibility a performance area is (Carter, 1991; Carter and Greer, 1993; Kravchuk and Schack, 1996). Focus on certain PIs can signal certain strategies to certain stakeholders. In public sector the incentives are (often) non-financial. Instead of using PIs tied to financial incentives as often analysed in agency theory, public sector PIs may have incentives through the *embarrassment effect* which is a result from failing to meet relevant performance expectations. Such embarrassment may be effective for the organisation because it can stimulate managerial search activity for future improved performance. However, this is somewhat contrasting the emphasis on building motivation and commitment as found in many other popular management control models, for instance as in management by objectives (MBO) (Poister and Streib, 1995) and total quality management (TQM) (Berman and West, 1995).

In spite of the fact that organisational learning is a major ingredient in the performance measurement research programme, there seems to have been published only a few empirical studies on performance measurement and its effects on organisational learning (e.g. Smith, 1988; Carter, 1991; Meyer and Gupta, 1994). Case studies showed that PIs were used as learning devices in organisations (Carter, 1989; Carter, Klein and Day, 1992). PIs may detect outliers both as potential failures or as successes. Such detection, 'tin-opening' (Carter, 1991), may address further investigations on variation in organisational forms. One major advantage with cost-benefit and policy analyses and thus performance measurement, is that implicit judgements can be made explicit and subject for analysis when pursued with integrity (Wildavsky, 1966). At the same time, this points directly to several political aspects as power, conflict and transparency, and will be discussed later on. In the longer run performance measurement may adjust rules, routines and SOPs. Rules are reflecting organisational learning processes by which organisations adapt to their environments. Such behaviour has been extensively studied in conjunction with organisational effectiveness and institutional legitimacy under bounded rationality.

**Table 3.** Benefits of using performance measurement

<b>Perspective</b>	<b>Functions</b>
<i>Instrumentalism</i>	Monitor efficiency, effectiveness and equity Enhance control and accountability ('hands-off control') Reduce uncertainty Reduce ambiguity Reduce information asymmetry Signalling ('dials') Incentive ('embarrassment effect') Detecting problems, failures and successes Enhance memory and retrieval of information Enhance learning ('tin-openers') Develop rules, routines and SOPs
<i>Institutionalism</i>	Socialisation ('infuse with value') Ritual Ceremony Legitimation Symbolising Myth Fashion
<i>Politics</i>	Reveal conflicts Change power relations Redistribute resources Enhance transparency Increase credibility (prestige)

*Institutionalism*

Institutional leadership through organisational cadres and culture promoting esteemed values has been one of the core explanations for institutional effectiveness in the old institutionalism (Selznick, 1957). Organisational structures and processes as performance measurement and annual reporting may play a significant role also in socialising recruits and in changing or upholding organisational values through culture (Pfeffer and Salancik, 1978).

Several studies revealed symbolic use of information (Feldman and March, 1981). Sørensen (1994) found that 53% of the Norwegian municipalities reported that they applied assessment of productivity. However, only 15% provided some kind of quantitative performance measures on productivity. This may imply symbolic use of organisational control models, but could also have reflected lagged implementation. For instance, Hall and Rimmer (1994) and Palmer (1993) reported that quality of service, customer satisfaction and achievement of goals were least used as PIs, whereas

Hyndman and Anderson (1995) reported that there was an enhanced emphasis on quality and effectiveness reporting from 1988 to 1992. Carter (1991) stated that PIs were very much the fashion of the 1980s in the UK, despite that this method was grounded on older ideas from the 1960s. Use of symbols and rituals could be an effect of lack of tacit products and services as output of the organisations (Pfeffer, 1990) and may therefore be of special relevance to many public sector organisations.

### *Politics*

Information is not only for internal use but could also to a large extent be used to influence or adapt to the environment. Rational organisations could therefore seek to design themselves in order to minimise the necessity for manoeuvring and compromise (Thompson, 1967; Pfeffer and Salancik, 1978). Performance measurement may be used in several strategies for coping with power and dependence and thus requires design of appropriate information systems. This was corroborated by the findings that the development of PIs had provided better measures for decisions on municipal mergers (Boyne, 1996). This supports the notion of PIs as highly exposed for politics.

The purpose of public sector is to solve problems and conflicts which the market and volunteer exchange can not solve. In political institutions ideologies should be inconsistent, and mistrust and scepticism are encouraged (Brunsson, 1989). Performance measurement may in this context reveal underlying conflicts, inconsistencies and priorities to the legitimate decisions makers and to the proper decision arena, rather than having political decision processes behaving as garbage can processes subject to unrepresentative or uninformed political influence (Wildavsky, 1966, 1969). Performance measurement may inform both the advocates and the guardians in the budgeting processes. Performance measurement could both increase transparency in organisational processes and enhance credibility of the organisational outcomes. Both transparency and credibility are valued in representative, political institutions.

### **Obstacles to performance measurement**

The organisational obstacles to using performance measurement have been categorised into the three phases of implementation, use, and effects, cf. table 4.

**Table 4.** Obstacles to using performance measurement

<b>Phase</b>	<b>Obstacles</b>
<i>Implementation</i>	Low theoretical or methodological planning competence Little resources/capacity for development Lack of implementation network structure Impatience Resistance
<i>Use</i>	Lack of relevant statistics Measurement errors Misinterpretation Low decision relevance Need for rich information Running down of PIs Proliferation of PIs Information overload Indirect lines of responsibility (common agency) No ownership of performance Loyalty to professional norms rather than to management Misrepresentation (manipulation of data) 'Creaming' Discredit of PIs
<i>Effects</i>	Suboptimisation Tunnel vision Myopia Measure fixation Gaming/Ratchet effect Ossification Revealed complexity Increased transparency Increased accountability Increased conflicts ('decibel meter') Reduced credibility (prestige) Reduced legitimacy Reduced power Reduced resources (negative political feedback)

*Implementation*

Implementation of performance measurement systems is treated as investment projects. The costs must be balanced against the value of improving government performance and credibility (Jensen and Meckling, 1976). On the other hand, incremental budgeting may after all be more cost efficient and rational than a formal performance measurement system (Lindblom, 1959). However, the performance measurement costs may be reduced by using available, existing data, using random samples rather than population data, and employing agency personnel both to collect and analyse data. Carter (1989)

held that the performance measurement progress in the UK had been tardy and data-driven, and that PIs remained an imperfect and often ineffective instrument of control. Midwinter (1994) argued that in Scotland the rhetoric of performance measurement was much more elaborated than its methodology. Most PIs could be described as 'local government statistics' rather than performance measurement and were invalid for inter-unit and inter-organisational effectiveness comparisons. Thus, implementation requires competence in welfare theory and public choice (Wildavsky, 1966; Jackson, 1990), as well as capacity for information system development and adequate training (Nyhan and Marlowe, 1995). The implementation process itself may have a significant impact on the costs and overall potential for usage. A common approach to implementation studies has been to distinguish between top-down and bottom-up processes and where the latter have been claimed to enhance implementation success (Likierman, 1993). However, also implementation structures as networks and decoupling could have substantial positive impact on information systems and organisational control (Hjern and Porter 1981; Johnsen, 1999). Competence, overcoming resistance, and patience are required as implementation of performance measurement systems commonly extend three to four years (Jackson, 1993).

A common management slogan is 'what get measured gets done'. One may measure and monitor certain items and relations in order to achieve desired changes. The process of placing issues on the agenda through measurement may reveal management's preferences or the organisation's objectives. Who decides what and how issues are to be measured furthers power over other participants in the relation. At the same time information systems which are not for external legitimisation purposes only, face a risk of resistance. The specialists who are in charge of performance measurement may be regarded by stakeholders as 'techies' who are into getting too much control relative to status quo. Resistance against measurement and conscious misuse or influence on the measures or processes, may also further power to those who measure or who defy measurement in the relation.

#### *Use*

Resistance towards measurement and possibly changes from these processes may be a reasonable objection due to abuse of the data which may encompass measurement

errors, non compatibility in comparisons, low competence among the intended users of the data, and fear of misinterpretation (Ballantine, Brignall and Modell, 1998). *Misinterpretation* is to send wrong policy signals due to bounded rationality, although the agent is in possession of all the facts. Edwards (1998) reported that an interest group due to lack of expertise made errors of interpretation, resulting in potentially loss in credibility and disempowering. The risk of misinterpretation is especially present if relevant comparison to time-series and cross-sectional data are lacking, and the PIs have low validity and reliability (Hyndman and Anderson, 1995; Thompson, 1995; Boyne, 1997). In short, PIs may after all not be decision relevant. But, reluctance to implement performance measurement could be motivated by fear of losing power and to be cut off from the political centre (Egeberg, 1995). Self-interested bureaucrats may prefer policy-making tasks which require rich information (Daft and Lengel, 1990), and avoid routine and technical matters which may require less rich information typically measured with PIs. If PIs reveal information to the politicians which formerly have been exclusively in the bureaucrats' domain, the politicians could make more policy and the bureaucrats less (but more dull routine work). Thus, bureaucrats could be reluctant to implement such information systems.

Because political institutions in the public sector are rational complex organisations, and the actors typically will incorporate all relevant arguments (Brunsson, 1985), there is a potential for considerable proliferation of PIs and information overload. The performance measurement system then easily is subject to the running down of PIs as the agencies adapt and hence the PIs no longer discriminate performance, resulting in even more proliferation.

Outcomes of public sector services are commonly complex. Though there may be much interdependence between units, the responsibility for causing an effect on a service may be shattered both around in the organisation and outside the organisation through common agency. There may on these reasons be no real 'ownership of the performance'. The PIs were seen as imperfect instruments of control resulting in unwanted 'backseat driving' without providing a greater degree of central control over services (Carter, 1989). However, this may be no real obstacle to performance measurement because measurement typically is employed in order to enhance organisational learning. However, accountability to professional norms by clan control rather than to management by output control, may be an obstacle to performance

measurement.

Opportunism may impinge upon measurement and explain why organisations have obstacles to using such systems. *Misrepresentation* is deliberate manipulation of data so that reported behaviour differs from actual behaviour. A common strategy to overcome or reduce this problem is to have the front-line staff collect and record the data which then are integrated into their own information systems. This may also reduce the proliferation problem. A special variant of misrepresentation is *creaming* which is serving those clients who most likely will profit from the measurement, by only measuring selected aspects to divert the attention. Both misrepresentation and creaming would likely result in discrediting PIs in the longer run.

#### *Effects*

Dysfunctional effects of narrow or biased organisational goals are highly relevant obstacles to using performance measurement as organisational control. *Suboptimisation* is the pursuit of narrow local objectives by managers, at the expense of the objectives of the organisation as a whole. *Tunnel vision* is defined as an emphasis by management on phenomena that are quantified in the performance measurement scheme, at the expense of unquantified aspects of performance. *Myopia* is the pursuit of short term target at the expense of legitimate long term objectives. Myopia could be countered by measuring processes related to long run effectiveness, rather than measuring outcome. *Measure fixation* is defined as an emphasis on measures on success rather than the underlying objective. For instance, in several studies PIs on equity were found to be sparse relative to data on cost efficiency, even though the critique of the emphasis on cost-minimising rather than welfare optimising has been known in the public administration literature for long time (Simon, 1947/1997).

Performance measurement may also be exposed to more dysfunctions common in the Soviet and budgeting literature. The *ratchet-effect* may be explained as the phenomenon where targets are irreversibly raised in response to one year's productivity improvement. This effect may be anticipated and countered by gaming. *Gaming* is defined as deliberate manipulation of behaviour to secure strategic advantage. Gaming leads to distortions in actual behaviour, while misrepresentation is the distortion of reported behaviour. Gaming may be countered by using a number of PIs which may be difficult



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to game simultaneously. However, this strategy also may lead to proliferation. Another strategy is to use performance measurement which is independent of historical data. Methods as data envelopment analysis (DEA), ratio analysis and benchmarking using cross-sectional data may also counter gaming. These methods may function as introduction of competition through pseudo-markets and selection of 'best-practices'. Albeit such measures may enhance cost efficiency and equity, variation and selection are no guaranties for optimality (Alchian, 1950). Bureaucratic measurement schemes can furthermore inhibit innovation and lead to ossification. *Ossification* is defined as organisational paralysis brought about by excessively rigid systems. Ossification could be countered by annual system reviews using the criterion of decision-relevance and cost-benefit judgements, in addition to rewarding managers for awareness of new challenges.

If the political perspective could be argued for explaining benefits from using performance measurement, then this perspective could be used in explaining organisational obstacles also. If the outcome could be revealing the organisational complexity and inconsistencies to the environment through transparency and accountability, the implications may as well turn out to some stakeholders as increased conflicts and decline in both credibility, legitimacy, and hence reduced power and less resources in the longer run. For instance PIs in central and local government, which are public information, may enhance the *decibel meter*, which is feedback politicians receive from constituency groups by bureaucratic performance (Moe, 1984). Although 'back-seat driving' may have no immediate effects on enhanced control, several long run consequences could be anticipated. As central government or the local government principals learn more about local government slack, grants may also be reduced and not only redistributed. The effect of politicians granting reduced budgets to a bureau after exposure to new information from the agent is known as *negative political feedback*. Organisational obstacles to performance measurement may thus have both legitimate and non-legitimate reasons.

### CONCLUSIONS

Organisational actors implement and use performance measurement when the estimated

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overall benefits supersede the expected overall costs. This explanation corresponds to standard, positive, agency theory arguments. However, the costs and benefits must be examined along dimensions of instrumentalism, institutionalism and politics simultaneously. The costs and benefits may also vary over the different stages of implementation, use and effects. As the conclusion is profoundly simple on the conceptual level, it is overly complex, controversial and indeterminate on a practical level. One may assume that power and resources of using PIs will change during the performance measurement system's life cycle, from case to case, between organisational units, and between governmental levels. That is when politics enters the stage. This may call for empirical studies of users of PIs as advocates and guardians, 'techies' (experts) and laymen, and as winners and losers.

The dominant perspective on organisational control has been managerial cybernetics, contingency theory, and symbolism from new institutionalism. However, the core of a public sector performance measurement research programme should also incorporate adjacent perspectives as agency theory, public choice, organisational learning, and not at least the resource dependence perspective which in fact incorporates many of the other theories and, furthermore, addresses politics explicitly. Paradoxically, the resource dependence perspective seems at present to be under-utilised in public management. The literature review has revealed several concepts as being relevant in explaining performance measurement, for instance decision relevance, running down, proliferation, slack, asymmetric information, uncertainty, and ambiguity. This study documents public sector performance measurement as a very complex organisational form used for instrumental, political and institutional reasons simultaneously. The findings do not, however, give any unequivocal support for the decoupling proposition, maybe because it neglects resistance. Nor has the conventional wisdom from contingency theory of use of budget and clan control rather than behaviour and output control (i.e. performance measurement) under contingencies of ambiguity and uncertainty, provided adequate explanations, although this may also be due to its use of abstract concepts, complicated presentation, and disconnection from decision variables actually used in organisations (Pfeffer, 1997).

The present study is limited regarding review of many relevant theories to include in a public sector performance measurement research programme. Specifically it should be noted that the mimetic isomorphism proposition in new institutionalism (DiMaggio and

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Powell, 1983), where organisations adapt to ambiguity and uncertainty by modelling themselves after other organisations which are perceived as successful, could provide explanations of organisational use of performance measurement under contingencies of asymmetric information, uncertainty and ambiguity, which are highly relevant for public sector performance measurement. Such explanations may simultaneously combine both instrumental, institutional and political dimensions. Furthermore, the mimetic isomorphism proposition, in contrast to the decoupling proposition, to a large degree corresponds both to agency theory, organisational ecology, classical contingency theory as well as with the resource dependence perspective.

Future research on public sector performance measurement may be fruitfully pursued along several paths. First, a conceptual model of organisational use of performance measurement may be developed. Second, empirical studies of how organisational control structures are used could be utilised to put hypotheses from different theoretical perspectives and theories to empirical tests. Third, more empirical studies on effects of performance measurement systems may be conducted.

## 4 Hypotheses

The purpose of this chapter is to formulate the research problem initially addressed in chapter 1 in greater detail. This is done by developing a conceptual model of organisational use of performance measurement in political institutions, and formulating corresponding, testable hypotheses. My main research question is how asymmetric information and uncertainty impinge upon performance measurement in political institutions. However, it is now time for me to draw upon the conceptual discussion from chapter 2 and the empirical evidence I have reviewed in chapter 3. This means that when I shall try to answer my overall research question, there are several issues related to it that I want to address in order to provide a qualified answer. Specifically, the notions of ambiguity and complexity as dimensions of uncertainty have to be recognised.

To recapitulate chapter 3, the literature review revealed several ‘white spots’ in the literature regarding organisational use of performance measurement in the public sector. First, conceptual studies on the organisational level are lacking. Second, some assertions with public management are taken for granted without, or with contradictory empirical support. Third, there have not been many empirical studies of the underlying causal processes to explain the organisational diffusion, use or effects of public sector performance measurement. Fourth, power issues have only implicit or seldom been addressed. A conceptual model of organisational use of public sector performance measurement seems on this background to be warranted before one proceeds with any further empirical studies.

The rest of the chapter is outlined as followed: In the next section concepts and relationships explaining use of public sector performance measurement derived from agency theory/public choice, contingency theory, and new institutionalism are

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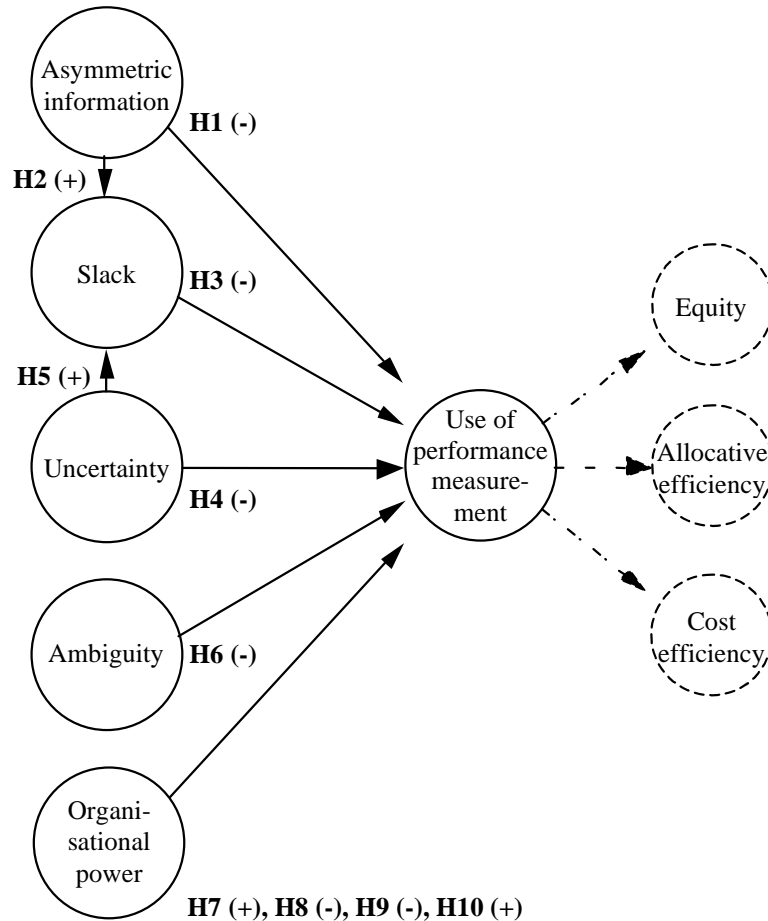
elaborated. A conceptual model is formulated and testable hypotheses are stated. All hypotheses are stated in present tense and written as positive assertions. They are not written as 'null' hypotheses. The hypotheses are formulated consistent with the evidence stated in the literature and not necessarily according to what I personally have believed. The third section discusses the conceptual model based on common criteria.

### THREE PERSPECTIVES ON ORGANISATIONAL CONTROL

Agency theory and public choice are chosen from the economics of organisation as relevant perspectives for the conceptual model because they both address information issues in organisational control explicitly. On the other hand, Mueller (1989) stated that power was largely ignored by economists and practitioners of public choice. This calls for a deeper appreciation of power issues in addition to the public choice perspective. The structural contingency approach states that under certain conditions, some structures are more effective than other structures. In recent years also the new institutionalism has been widely used, and especially among sociologist management researchers. The contingency theory and new institutionalism perspectives have been chosen because of their explicit treatment of ambiguity and uncertainty in organisational control. For simplicity and extending the terminology of chapter 3, I have labeled the public choice/agency model as an instrumental perspective, the contingency/new institutionalist models as institutional, and the political model as politics. Conceptually it is not possible to distinguish one, political model from the other perspectives because almost all the other perspectives used here encompass politics to some extent or another. Cf. for instance how public choice explains bureaucrats' use of asymmetric information. However, the research tradition within most perspectives but public choice and the resource dependence perspective, seems to have treated politics implicitly. In this study I have aimed at modelling politics explicitly.

The selection of concepts explaining use of performance measurement is based on the literature review in chapter 3. This review revealed the organisational concepts of asymmetric information, slack, uncertainty regarding the transformation process of input to output, ambiguity of output, and political power, as relevant to explain the organisational use of performance measurement in the public sector. The propositions

regarding the concepts (the ‘whats’) and their relationships (the ‘hows’) are presented together with the discussion of their underlying causal relationships (the ‘whys’) (Whetten, 1989). Hypotheses are then derived and are termed H1, H2, ..., H10, cf. also figure 4. Cues from the conceptual model to variables, indicators and data on the empirical level are discussed in chapter 5.



**Figure 4.** A conceptual model of public sector organisational use of performance measurement

Figure 4 is a conceptual model of use of performance measurement in political institutions. Otley (1980) noted that as organisations use a wide range of control mechanisms serving different purposes, it is difficult, if not impossible, to isolate the effect of one specific means of control, say use of performance measurement. He instead recommended an initial research strategy of trying to isolate those control systems which are particularly suited for certain circumstances. In figure 4 this means that the explanatory concepts are chosen for their presumed causal relationships with

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organisational control. That is, the conceptual model is modelling the relationship between organisational structure and organisational control. The relationship between organisational control as independent variable and its effects on organisational performance as dependent variable (the dotted lines from use of performance measurement to the three concepts of cost efficiency, allocative efficiency and equity), is not studied here. (See Steers (1975) for a review of empirical, multivariate models of organisational effectiveness, and March and Sutton (1997) for a discussion of studies with performance as a dependent variable.) The omission of effectiveness as dependent variable in contingency theory research has formerly been criticised in the literature (Otley, 1980). However, to include organisational effectiveness as independent variable to explain organisational control, has also been put forward (Langfield-Smith, 1997). It is this latter approach which has been chosen in this study: Organisational slack, which could be related to organisational effectiveness, has been used to explain use of organisational control models.

### **An instrumental model**

The typical problems studied in public choice are bureaucrats trying to maximise output, the budget or the discretionary budget, and the sponsor, often political representatives, maximising votes. In public choice it is asserted that uncertainty creates a potential to exercise power while information provides a capacity to do so. Public choice and agency theory have two relevant concepts for explaining organisational control and use of information: Asymmetric information and slack.

#### *Asymmetric information*

In the Niskanen-tradition of public choice, the word *bureaucrats* has two meanings. In a general sense it includes all full-time employees of a bureau. A *bureau* is defined as a non-profit organisation financed by an appropriation or a grant from a sponsor. For the most part bureaucrats refers to senior officials of a bureau with a separate identifiable budget (Blais and Dion, 1991). In this study the term bureaucrats is employed in the first mentioned meaning, as employees of a bureau.

Mueller (1989) concluded in his review of the Niskanen-tradition that the

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bureaucracy models of Niskanen are static models and do not directly explain why government grows. Mueller pointed to an indirect explanation of opportunism as ‘ability to misrepresent the true prices and quantities of publicly provided goods’ as cause. This may point to asymmetry and possibly the agents’ (bureaucrats’) ability to achieve sub-optimal solutions due to uncertainty of cost structure and output: ‘The ability to misrepresent [true prices and quantities] is likely to depend in turn on the size and complexity of the budget itself. The bigger the bureaucracy, the more difficult it is for outsiders to monitor its activity, and the more insiders there are who are working to increase the size of the bureaucracy. Thus, the bureaucracy is likely to depend on its absolute size’ (Mueller, 1989: 340).

In agency theory the concept of ‘specific information’ have been used in conjunction with organisation size: ‘For our purposes, *noncomplex* means that specific information relevant to decisions is concentrated in one or a few agents. (Specific information is detailed information that is costly to transfer among agents.) Most small organizations tend to be noncomplex, and most large organization tend to be complex, but the correspondence is not perfect’ (Fama and Jensen, 1983: 304). Thus, bureaucracy size could possibly be used as an indicator for degree of asymmetric information. The bigger the size of the bureau, either measured as budget or by staff, the greater the degree of asymmetry or specific information ‘in favor’ of the bureau.

Hypothesis 1 is formulated congruent with public choice but applied to political institutions with multiple principal–agent relationships. In public choice and in agency theory opportunistic behaviour is assumed undertaken in order to maximise budget or slack. The bigger the bureaucracy, the more difficult it could be for outsiders to monitor its activity, and the more insiders there could be to work for increasing the bureaucracy and increasing slack (Mueller, 1989). With increasing size there may be more agents who could co-operate in misrepresenting the true prices and quantities of the publicly provided goods, thus asymmetric information is assumed to increase with the number of bureaucrats. One means to increase the bureaucracy, budget or slack, is by utilising private information, distort information or hide information. Opportunistic behaviour could in this manner then be conceptualised as refusing performance measurement in order to utilise asymmetric information between the agent and the principal. As performance measurement reduces asymmetric information, the bureaus will resist such implementation and use. Thus, one could assume that performance measurement would



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decline relatively with increasing bureaucracy size. However, this would be a static analysis. Agency theory may also be used to explain organisational development and implementation of control structures when there is asymmetric information, which one could assume is a typical trait with political institutions. The principals may employ monitoring in order to facilitate organisational learning. This calls for performance measurement which in the longer run may reduce uncertainty. The propositions provided on asymmetric information from public choice and agency theory thus seem to be contradictory and the net effect indeterminate. To my knowledge, empirical tests of these two propositions simultaneously, have not been documented in the literature. As conventional wisdom predicts that output control is relatively less used under uncertainty, hypothesis 1 is therefore formulated congruent with public choice.

**Hypothesis 1:** Organisations with much asymmetric information use performance measurement in a lesser extent than organisations with little asymmetric information.

### *Slack*

Slack has been defined as payment to coalition members in excess of what is required to maintain the organisation. In public choice and in agency theory one assumes that the bureaus and agents may behave opportunistically. They may maximise the discretionary budget (budget slack) (Migué and Bélanger, 1974) or utilise private information for rent-seeking. In order to do so, they could avoid (exit) or resist (voice) performance measurement (Hirschman, 1970). Cf. also the concept *influence cost* from agency theory which is defined as attempts to reallocate and protect rents and quasi-rents within the organisation (Milgrom and Roberts, 1992). Influence costs are assumed to rise with the size of the organisation because relative more people will compete for the bigger rents in absolute size. Persistent non-legitimate slack in one municipality or in one governmental level, implies that other organisations or citizens are without some resources which they otherwise could have been entitled to. Mueller (1989) found evidence for government bureaucracies having higher unit costs than private firms when they supplied measurable outputs (tons of garbage collected). Mueller hypothesized that level of slack will increase with bureaucracy size and complexity of the budget. Blais

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and Dion (1991) found no evidence for Niskanen type hypotheses regarding slack-optimising bureaucrats, but the effect of size was not investigated.

Hypothesis 2 is concerned with actions the bureaucrats could execute in order to enhance slack if slack initially is low, alternatively actions to keep slack high in circumstances where slack initially is high. For instance, the agent could refuse to undertake performance measurement in order to conceal a high or an illegitimate level of slack. Alternatively, with low level of slack the agents could try to reveal information in order to influence decisions such that the level of slack in the longer run increases. As there are more bureaucrats in large organisations who could behave opportunistically and facilitate asymmetric information, one could therefore assume that organisations with more asymmetric information (large bureaucracies) have relatively more slack than other organisations (hypothesis 2).

**Hypothesis 2:** Organisations with relatively more asymmetric information have relatively more slack.

The NPM literature has also addressed slack as an explanatory concept to explain the doctrinal components of NPM. Hood (1991, 1995) proposed the motif-and-opportunity proposition to explain the adoption of components in the NPM in different countries. That is, fiscal stress, meaning little slack, and a governable public sector, in the meaning that the societal ruling coalition is willing or able to implement changes, both have to be present for NPM to be used. If local government efforts to legitimise increased slack do not succeed, these municipalities may face the risk of employees, bureaucrats, inhabitants and firms voting with their feet by migrating to other municipalities. Thus, the employment of performance measurement in this conflict of scarce resources by the concept of slack is a relevant causal explanation to be modeled (hypothesis 3).

**Hypothesis 3:** Organisations with relatively little slack use performance measurement to a larger extent than organisations with relatively more slack.

### **An institutionalist model**

In the conceptual model in figure 4 the contingency perspective means that under some

combinations of ambiguity and uncertainty, some information systems are used more than other structures.

### *Uncertainty*

Uncertainty has once been defined as the difference between the amount of information required to perform a task and the amount of information already possessed by the organisation (Galbraith, 1973). The greater the task uncertainty, the more information must be processed during execution of the task to a given level of performance. Thus, the amount of task uncertainty is a result of a specific task and a specific organisation. To this one may add that then organisational history and power may impinge upon both uncertainty and the execution of tasks. A problem with Galbraith's (1973) definition of uncertainty is that organisations perform tasks in spite of uncertainty and lack of relevant information. Pfeffer and Salancik (1978) defined *uncertainty* as the degree to which future states of the world cannot be anticipated and accurately predicted. It seems as this definition is closer to the inherent meaning in uncertainty as used by Thompson (1967). I have therefore used the latter definition of uncertainty in my study.

Otley (1980) concluded that of all the contingent variables proposed, uncertainty in particular stood out. (Uncertainty was also referred to as unpredictability, and non-routineness.) Complexity and size were considered as important because of the uncertainty associated with them. Uncertainty is an alternative explanation to opportunism and slack-maximising in explaining the presence or absence of use of performance measurement. High degree of complexity in production can lead to uncertainty regarding the output of the production. There may exist several relations between output uncertainty and performance measurement. First, much output uncertainty may give little information with decision relevance from any PIs. This may cause performance measurement to be cost inefficient to undertake and reduce the likelihood of performance measurement of services with a high degree of output uncertainty. This explanation has been the 'conventional wisdom' and also expressed in public sector accounting and organisation theory textbooks.

Organisational complexity and uncertainty may be used in arguments which provide contradictory explanations to the conventional wisdom on organisational use or non-use of performance measurement. One argument is that less complex (small size)

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organisations may have easier flow of rich information (Daft and Lengel, 1990). Rich information is complex information and is often provided by face-to-face contact, verbal communication or direct observation. This gives little demand for formalised management reporting systems which anyway encompass information of low richness. It may not be feasible to collect large amounts of rich information in large organisations. Thus, information has to be condensed, analysed and aggregated into numbers and figures of low richness, especially for routine tasks which also could be more prevalent in larger organisations. Larger organisations may also achieve more benefits from the resources invested in performance measurement systems relative to smaller organisations. This may make information with low richness as PIs redundant or cost inefficient in small sized organisations.

A second argument may also be put forward. If there is much output uncertainty, this may call for measurements just in order to reveal information and enhance organisational learning (Thompson, 1967; Pfeffer and Salancik, 1978; Powell and DiMaggio, 1983). However, hypothesis 4 is formulated congruent with conventional wisdom contingency theory, and not the classical contingency, resource dependence or new institutionalism theories.

**Hypothesis 4:** Performance measurement is used less when there is more uncertainty in the service production.

In organisation theory it is often assumed that under contingencies of uncertainty, slack is favourable for organisational effectiveness. Slack can grease operations, trigger innovation, serve as stock of energy, and buffer against fluctuations and conflicts. In this respect one may assume there is an optimal amount of slack. Here I have for simplicity assumed the basic proposition that relatively more uncertainty leads to more organisational slack (hypothesis 5).

**Hypothesis 5:** When there is more uncertainty in the service production there is also relatively more organisational slack.

### *Ambiguity*

*Ambiguity* refers to words, sentences or events with two or more interpretations concurrently. It can also denote unclarity, complexity and paradoxes. Additionally it should be noted that ambiguity is a subjectively perceived situation (Weick, 1995). If ambiguity refers to lack of clarity, it could be similar to uncertainty. However, the main problem with ambiguity, and contrary to uncertainty, is that more information does not necessarily overcome the information (decision) problem.

In this study ambiguity has been restricted to the political processes in the local government representative councils. In public choice the concept *political competition* is used to denote rivalry among representatives or candidates for seats or other political resources. Baber (1983) discussed the difference between inter- and intraparty competition and auditing in the public sector. He argued that if political agents alone can deal more credibly with interest groups in local than in state governments, then the benefits to political entrepreneurs of party affiliation are relatively less in local government. Thus, intraparty competition likely plays a relatively greater role in contracting and monitoring in local governments than in state government. With a relatively high degree of political competition between representatives or candidates within the same party, one may assume that this can arouse ambiguity. Thus, there could be relatively more ambiguity in local government politics than in state or national politics.

With a high degree of ambiguity on political goals it could be difficult to state what is relevant to measure with PIs. It is assumed that ambiguity increases with political coalitions. Thus, political coalitions could diminish the use of performance measurement because ambiguity is not reduced by more information. This could reduce the likelihood of using performance measurement, according to contingency theory. In the conventional wisdom then, more ambiguity implies less use of output control and hence less use of performance measurement (hypothesis 6). In the new institutionalism, more ambiguity induces symbolic use of control structures according to the decoupling proposition (Meyer and Rowan, 1977). In the mimetic isomorphism proposition (Powell and DiMaggio, 1983) however, more ambiguity leads to enhanced modelling activities after perceived successful organisation. If successful public sector organisations are conjectured with use of performance measurement, then more ambiguity furthers more

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use of performance measurement, and indeterminate if this notion is not the case. As with the test of the contradicting explanations of monitoring advanced by public choice versus agency theory, I do not know of empirical tests of the competing propositions of decoupling versus mimetic isomorphism. However, as the conventional wisdom corresponds both to the 1980s version of contingency theory and to the decoupling proposition, hypothesis 6 is formulated according to these explanations rather than the mimetic isomorphism proposition.

**Hypothesis 6:** Performance measurement is used less when there is more ambiguity than when there is less ambiguity.

### **A political model**

Organisational, political power is assumed to be constituted by laws and regulations and to be dependent upon political parties, interest groups, political and executive leadership and management, and all sorts of coalitions.

#### *Management competence*

Several studies indicate that municipal leadership may only have modest effect (Pfeffer and Salancik, 1978). Changes of municipal leaders as mayors and chief administrative officers, only explained a small part of the variance in total income and expenditure in Canadian municipalities (Begadon and Agócs, 1995). Characteristics of cities, local government structure, and interest groups' influence, had far greater impact on municipal income and expenditures than either short-term historical changes or changes in leadership. Nevertheless, a weakness with such studies could be that analyses of broad budget allocations do not address the ability of municipal leadership to influence allocation or distribution within the aggregate budget. Another criticism of such studies is that budgets are concerned about input, while management and leadership may be more concerned about output and outcome. The conclusion regarding low municipal leadership influence may therefore have been valid on organisational budget decisions, but not on performance. Leadership may have more to say on management issues as performance measurement, than on budgets, which is a typical responsibility of the

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representatives. Leadership variables have therefore been omitted in this study. On the other hand, a variable for management skills and competence on formal control structures have been included.

One may assume that performance measurement and monitoring are demanding regarding management skills and competence. For instance, in Lüder's contingency model of financial accounting innovations, staff qualifications are categorised as a component of implementation barriers (Chan, Jones and Lüder, 1996; Laughlin and Pallot, 1998). Thus, management skills and competence are candidates for formulating hypotheses. Furthermore, if there is low management competence, the organisation could try to balance this over time for instance by investing in research and development or participating in networks. Networks could take the form of formal or informal co-operation with other governmental organisations, consultants, business schools or universities. Inter- and intra organisational implementation structures or networks are also common in industries and government. Organisations where management has access to or participates in performance measurement networks, are likely to have relatively more performance measurement. If such networks are known in advance, they could have been included as variables in the study. Some examples of explanations could be that in smaller organisations there is relatively less slack and less management competence in performance measurement, and hence use of performance measurement are less than in bigger organisations. However, as the political leadership is assumed to seek control by employing skilled, competent and loyal management, this may increase management competence, but could also increase the need for monitoring the agents (Zimmerman, 1977).

**Hypothesis 7:** Performance measurement is used relatively more when there is more management competence (power).

### *Political power*

Political power and politics are subject to several approaches of conceptualisation. NPM has been adopted both in countries with conservative or liberal rules as in the UK and USA in the 1980s, as well as in countries which usually are regarded as social democratic or socialist as Norway and Sweden (Hood, 1995; Laughlin and Pallot, 1998).

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NPM has also been upheld in countries when the major political preferences have shifted from conservative to liberal or to social democratic as in the UK and in the USA in the 1990s. Sørensen (1995) studied spending preferences of elected local government politicians in Norway and argued that political parties were particularly relevant as they are the basis for the electorate choice. He found that party affiliation had an impact upon the demand pattern in the Norwegian local government. Aaberge and Langørgen (1997) found that the municipal party concentration, measured with the Herfindahl-index, correlated with the marginal propensity to save. Hence, they concluded that a strong political leadership had the opportunity to resist pressure for spending increases. Thus, political power seems to be a relevant concept both judged by theoretical and practical considerations.

Information on cost efficiency, allocative efficiency and equity from performance measurement may be used to alter budgets both in content as well as in size. From public choice it is known that leftist representatives usually prefer to expand public activities while rightist representatives prefer to reduce or hold activities (Sørensen, 1995). Left-wing parties were the Socialist Left Party and the Labor Party. Leftist parties could oppose performance measurement, because this information may be used to re-allocate resources from the public sector to the private sector. But, leftist politicians could also use performance measurement to argue for increased resources and taxes in the longer run (optimise output to a given level of input). Rightist politicians could use performance measurement in order to reduce slack and hence reduce public sector resources and tax burden in the longer run (minimise budget to a given output). Thus, both rightist and leftist politicians are expected to use performance measurement in order to enhance cost efficiency, allocative efficiency and equity according to their political preferences. How political preferences would impinge upon performance measurement on the organisational level, has hitherto not been addressed. There is therefore no theoretical justification regarding any directional effect of political preferences on use of organisational control structures. Thus, the relationship between political preferences and organisational control is to be investigated empirically.

### *Interest groups*

Power to influence coalitions and hence decisions is assumed to stem from relative size



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of the interest groups. It is therefore assumed that organisations will be influenced by their most powerful interest groups in order to use performance measurement in accordance with the preferences of the interest groups. Sørensen and Hagen (1995) found that local government representatives (agents) generally were responsive to the demands of the local residents (principals). The national party politics seemed to have had little impact on the local adjustment processes. Thus, in studies of local government politics one may, to simplify the issue, rule out influence from national party politics. A large share of local government employees of the total number of voters may on the other hand have influence on the representatives preferences and thus on organisational decisions and actions. Most Norwegian government employees preferred a higher public spending level than did other citizens (Sørensen, 1995). Furthermore, public sector professionals demanded greater quantities of their own services. Relative power between politicians and public sector employees may then impinge on the use of performance measurement. I assume that the better informed the politicians are, the less power the interest groups will have. The more power the bureaucrats' interest groups have, the less the political power of the sponsors, assumed that there are no coalitions between the political parties and the public sector employees.

While budget allocations may attract considerable attention both from internal and external interest groups, one knows little or nothing empirically of how organisational control models attract interest group attention. A problem in the analysis is on the one hand, if interest groups are present, to state that they have sought to influence organisational decisions. On the other hand, interest group may put considerable pressure both on politicians and on management. However, interest group activities may not always succeed. On the contrary, such activities may also trigger enhanced managerial and political efforts in performance measurement to suppress the power of internal interest groups in political institutions. However, hypothesis 8 is formulated with the assumption that more internal interest group power affects performance measurement negatively.

**Hypothesis 8:** Performance measurement is used relatively less when the public sector employees are more powerful.

Sørensen (1995) also found that members of the leftist parties tended to have relatively

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more representatives with a public sector employment background. Thus, there may be an interaction effect between leftist political power and public sector employee interest group power. As representatives' political preferences and the over-representation (adverse selection) of public sector employees among the left-wing parties have not been previously studied in relation to use of formal control models in organisations, a model with interaction terms may be included in empirical studies.

**Hypothesis 9:** Performance measurement is used less when there are relatively more leftist representatives and at the same time relatively more powerful municipal employee interest groups.

### *Resource dependence*

*Municipal dependence on local taxpayers* could be a motivating force for disclosing information as performance measurement in annual reports. Although there are many information strategies open to a local government which want to legitimise efficiency and avoid Tiebout mobility out of the municipality, use of annual reports and media may be relevant. Local government dependence on local taxpayers is assumed to correlate with relatively much use of performance measurement, cf. hypothesis 10.

**Hypothesis 10:** Performance measurement is used relatively more when there is a high dependence on local taxpayers.

## DISCUSSION

A model should be judged on the three criteria of truth, beauty and justice, where justice is a model's ability to contribute to making a better world (Lave and March, 1975). These criteria are to be pursued, but they are seldom achieved.

### **Truth**

Truth has to do with a model's ability to be tested and to reveal empirical support of the

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hypotheses. The model in figure 4 is testable in the sense that significant correlations in the expected directions between variables measuring the explanatory concepts, and between these variables and the studied phenomenon organisational use of performance measurement, would corroborate or falsify hypotheses derived from the propositions. Furthermore, it is better to compare alternative models rather than to accept or reject a single model (Lave and March, 1975). Regarding the demand for testing alternative models instead of one single model, the conceptual model depicted in figure 4 is comprised of three models. The criteria of testing alternative models can be accomplished by empirical tests of hypotheses derived from all the three alternative models simultaneously. In addition, the instrumental model, the institutional model, and the political model may be judged and compared to the symbolic perspective in new institutionalism as an alternative explanation.

### **Beauty**

Beauty is characterised by simplicity, fertility, and surprise. These three dimensions will be briefly discussed below.

### *Simplicity*

The model in figure 4 have only concepts included which were discussed as explaining organisational use of performance measurement in the literature review in chapter 3. Concepts explaining the implementation phase of performance measurement systems have not been included in the conceptual model.

Some frameworks explaining organisational structures and use of information have already been proposed, as Lüder's contingency model of public sector accounting innovation and Hood's (1995) opportunity-and-motive explanation for NPM. Such frameworks may also take culture and social and political structures into consideration. Hood's motive-and-opportunity propositions could have cultural assumptions regarding opportunity with implications for slack. Hofstede (1984) defined *culture* as collective programming of the mind. Hofstede (1984) studied culture in a multinational company in 40 countries and his analysis revealed 11 national cultural clusters based on the four main dimensions labelled 'power distance', 'uncertainty avoidance', 'individualism' and

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'masculinity'. Finland, the Netherlands, Norway, Sweden and Denmark comprised for instance one such cluster (a North-European group). South-Africa, Germany, Switzerland and Italy was another group. New Zealand, Ireland, UK, Canada, Australia and USA belonged to a third cluster (an Anglo-American group). An objection with regard to comprehensiveness in the proposed conceptual model in figure 4, could be that cultural and societal structures have not been explicitly modeled. On the other side, judged by parsimony, one could argue that such factors could be explanatory concepts both with regard to size, slack, uncertainty, ambiguity, and power. However, for simplicity of the model these exogenous variables have not been included.

Hofstede (1984) concluded his study of culture by stating that in the past 30 years there had been too much reliance on American-made management and theories for countries in which neither the societal conditions nor the mental programming of the population were similar to those in the United States. He argued that there was a lack of locally valid theories of management and organisation in which the universally, the globally imposed, and the culturally specific elements were recognised. Thus, both the perceived and accepted level of uncertainty and ambiguity, and power in figure 4 could be dependent on culture both on a national level, and also on an organisational level.

In spite of the conceptual model's parsimony, the conceptual model in figure 4 nevertheless is comprehensive regarding potential concepts' relevance, as reviewed in chapter 3, for explaining use of performance measurement. The call for a theoretical foundation in public choice, agency theory and organisational learning (Jackson, 1990), and the importance of decision relevance (Mayston, 1985), proliferation and running down (Meyer and Gupta, 1994), have been incorporated. In new institutionalism, decoupling has often been over-emphasised (Carruthers, 1995), and power-issues has often been treated too lightly (DiMaggio and Powell, 1991). Instead of using decoupling from the symbolic perspective as explanatory mechanism only, both the classical as well as conventional wisdom contingency theories have been employed. The often omitted power issue in both public choice and new institutionalism has been accounted for by including a distinct model of power.

The comprehensiveness of the conceptual model also poses some potential problems. The concepts are selected from perspectives which may have different levels of analysis. Public choice and agency theory have assumptions at the individual level but nevertheless study group or organisational outcomes. Structural contingency theory is

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aimed at the organisational level. The resource dependence perspective is related to both intra- as well as interorganisational dependencies. The new institutionalism is often more concerned about organisational fields than with specific organisations. There may also be overlap of the models as power could have been modeled explicitly in all the three perspectives of instrumentalism, institutionalism and politics. The separation of power into one model on the other hand makes comparisons of different models more feasible later on at an empirical stage. This may enhance the possibility of selecting only concepts and models with empirical support and as such enhance truth and parsimony.

The conceptual model in figure 4 has several limitations. First, temporal effects are not modelled. However, in empirical studies the model may be employed with lagged variables. For instance, slack in period  $t - 1$  could be hypothesised to influence use of PIs in period  $t$ . One may also imagine that anticipated performance measurement in period  $t$  may influence slack in period  $t - 1$ , as seen from periode  $t - 1$ . Thus, simultaneity may be present. Second, the model is still overly simplified. Many control variables as national culture and governmental regulations are omitted. Third, only use of performance measurement as dependent upon either the bureaucrats or the political representatives as organisational constituencies, are modeled. Direct influence from voters or media are not modelled.

### *Fertility*

The fertility aspect is upheld by generality; making nouns and verbs general. Generality is pursued by the choice of general concepts in the model. The generality makes the model relevant for several theoretical perspectives as public choice and agency theory, structural contingency theory, and new institutionalism. The generality also makes the model fertile for empirical research. Studies may be executed by a variety of methods as by panel data design, cross-sectional studies and by case studies. Data may be collected from many potential sources and by different techniques as interviews, observations, surveys, and content analysis. Variables may span from micro level individual data regarding representatives' political preferences, to organisational meso level variables regarding services' output uncertainty and goal ambiguity, to organisational macro level variables as size, budget complexity and slack. Thus, the hypotheses are general enough to be utilised in a number of different research strategies with respect to design and data

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in later empirical stages. The conceptual model can in this respect also serve in different context as in central and local government, and in different nations and cultures.

### *Surprise*

A surprising model is an unpredictable model. The many tentative relations in the model(s) imply a large stock of potential surprises in explaining organisational use of information and addressing conventional wisdom. As an example, one may think of high degree of ambiguity and asymmetry as very likely to foster opportunism, but that strong bureaucratic norms of accountability, transparency and righteousness nurtured by altruistic organisational, or national cultures reduce such organisational behaviour. The conceptual model may also provide surprises in empirical tests of conventional wisdom both in management practice and in accounting theory, political science and in new institutionalism, as discussed in chapter one.

### **Justice**

The conceptual model may have several implications for theory and practice which in the longer run tentatively may be beneficial. First, many reforms have been studied in the political science or sociologist new institutionalism tradition and recorded as hypocrisy (Brunsson, 1989), as implementation failures, and as mere fashions, ceremonies and myths without altering organisational practice (Brunsson and Olsen, 1993), or again as complex and paradoxical patterns (Olson, Guthrie and Humphrey, 1998). The conceptual model developed in this study may give an enhanced understanding of the underlying causal instrumental, institutional and political dynamics present in such reforms and their contributions to the observed organisational practices and paradoxes.

Second, Lüder's contingency model has conceptualised financial accounting innovation at the national level. Hood's hypotheses have conceptualised core explanations regarding NPM at the national level. The model in figure 4 has conceptualised use of non-financial control systems at the organisational level. It fills in a gap where conceptualising the use of non-financial organisational control systems has been missing.

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The proposed conceptual model in this study has several implications for future research and some recommended research problems are addressed. First, as performance measurement has been described as one doctrinal component of the reinventing government movement and NPM, this model may contribute with factual knowledge about use of organisational control structures as performance measurement. Empirical tests of the proposed model or elements of it, may provide enhanced knowledge of how, where and why performance measurement is used in public sector.

Second, the model may be used to test hypotheses generated from public choice, agency theory, contingency theory and the new institutionalism simultaneously. This is warranted as much research on public management models and reforms has been studied descriptively in mainly a few perspectives, commonly structural contingency theory and/or the new institutionalism, without adequately testing alternative explanations from competing models, say budget maximisation or opportunism as main explanations put forward in public choice and agency theory respectively, or politics.

### SUMMARY

The main result of this chapter is a conceptualisation of the use of performance measurement in political institutions in a simple model with testable hypotheses. The hypotheses can also be classified into distinct models from different theoretical perspectives. These models may then be compared against each other. As such this conceptual model is a contribution following general advises in building models in the social sciences of comparing alternative explanatory models, and following the advise from Meyer and Gupta (1994) regarding comparing several models in trying to explain organisational use of performance measurement. The model encompasses not only potential opportunistic, budget-maximising or rent-seeking behaviour from the bureau, but also potential 'shirking' from the sponsors by not demanding performance measurement (assuming a certain level of performance measurement should be warranted), which is discussed in public choice but which has often been missing in agency theory. Furthermore, the model also conceptualises some political aspects which often have been missing and therefore have been called for in the new institutionalism.

## 5 Method

The purpose of this chapter is to explain the method I have used. This chapter is divided into six sections following this brief introduction: Research design, Content analysis and the dependent variable, Independent variables, Data analysis, Limitations and delimitations, and Summary. In the next section, Research design, I elaborate on why I have chosen a planned variation, correlational design, and why I chose a population study of the Norwegian municipal setting. In the second section, I explain why and how I used content analysis to collect data for the dependent variable. In the third section I document the measurement and data collection of the independent variables. In the fourth section, I address the selection of modified regression analysis as estimation method for the models. I have included a brief discussion on the limited applicability of significance tests in population studies. The fifth section states some limitations and delimitations of my study. (Delimitations are limitations on my study I have deliberately imposed.) The sixth and last section provides a summary of the method.

### RESEARCH DESIGN

The overall aim of this study has been to explore the limits of certain theories on the economics of organisation in explaining public sector management. Research designs in the social sciences are commonly divided into the three groups of exploratory designs, quasi-experiments, and correlational designs. The theories' concepts, relationships and domain of explanation have been relatively clearly stated in chapter 4. This excludes an exploratory study. Furthermore, as contingency theory often involves several independent variables, and testable hypotheses from a conceptual model already are



available, a research design with a relative large number of cases instead of case studies, could be employed in order to enhance the internal validity. I have therefore chosen a correlational research design, also called a cross-sectional study, in this project. A correlational design means that the relations between some independent variables and dependent variables are measured. However, this design does not establish causality. Both the time order of the variables and the ruling out of the alternative explanations have to be established by theoretical and logical considerations (Frankfort-Nachmias and Nachmias, 1992).

### **Setting**

I have already chosen local government as context for my study of organisational control in political institutions. Local government both has substantial macro economic impact and provides core services in the welfare state. However, it is difficult to draw the boundaries between local government and other organisations, both over time and between countries. Local government in Scandinavia seems to be suited as setting for testing agency theory derived hypotheses because the municipalities are organized explicitly in terms of principal–agent relationships (Olson, 1990). The setting which has been selected for the empirical study was the municipal local government in Norway. The municipal sector is assumed to have a relatively high degree of ambiguity and services which often are associated with high levels of uncertainty. Local government as setting also provided a high degree of control for ‘external variables’, as the local government has relatively comparable institutions. However, it should be noted that Norway is a small country and the European countries have different governmental institutions compared to the complexity for instance of the US public sector (Olson, Guthrie and Humphrey, 1998).

The governmental sector is often organized in three, hierarchical levels. The Norwegian government is also divided into three levels: local authorities (municipalities) regional authorities (counties), and the central government. Central control over the local government may be classified into four categories: Entitlement of citizens’ legal rights to services, restrictions on organisation by legislation and regulation, minimum standards, and approval of budgets and loans. Norwegian local government is more coercive and centrally controlled than other Scandinavian countries

(Baldersheim and Ståhlberg, 1994). However, the Norwegian local government seems to be highly suited as setting for studies of the agency theory, public choice, contingency theory and institutionalism hypotheses.

### **Population**

On the onset it should be noted that the results from this study are not designed to be of empirical generalisability to local government in Norway or in other specific countries in general. The purpose of this study has rather been to study some theories in an empirical setting and eventually generalise the results to a conceptual level. Financial disclosure has been mandatory in Norwegian local government since the 1920s and is now regulated by the Municipal Act of 1993. However, use or disclosure of PIs have not been mandatory in Norway, albeit certain plans were developed in the mid 1990s for mandatory disclosure of municipal PIs from 2001 and onwards. On the other hand, the central government and Statistics Norway collects large amounts of local government statistics which to some extent also could be used as PIs.

The Norwegian local government was in 1996 comprised of 435 municipalities and 18 regional municipalities (counties). It is commonly claimed that the intermediate level of government, the counties, is subject to more extensive central control than is the lower, municipal level (Sørensen, 1997). One may therefore assume that the municipals have more discretion and therefore are better suited empirically as population for this study, than the counties are. In addition, the Norwegian local government has far more municipalities than counties, something which may be utilised in order to have sufficient number of cases for a multivariate analysis.

To achieve sufficient variation in the independent variables, a planned variation design has been employed. Specifically, due to the fact that the large majority of the Norwegian municipalities are of rather small size, all the larger municipalities (the 39 municipalities with 20,000 inhabitants or more in 1996, the capital Oslo excluded), have been included in the population. The remaining municipalities were selected from Southern part of Norway only in order to reduce institutional and structural variability compared to including municipalities from Northern Norway as well. Furthermore, to reduce the number of units from the maximum level of 435 municipalities to a manageable number of cases for the content analysis data collection, only municipalities

from seven of the 18 counties were selected, This stepwise procedure resulted in a theoretically defined population of 176 municipalities, including the 39 large municipalities, from all the five main regions of Norway. Of the 176 municipalities, 11 did not respond, and three municipalities did not publish any annual report in 1996. All the 11 municipalities which did not respond, had less than 20,000 inhabitants. The usable population was then 162 annual reports. I judged this to be an acceptable number of cases for undertaking a multivariate analysis.

### CONTENT ANALYSIS AND THE DEPENDENT VARIABLE

The context of potential strategic and symbolic use of information means that both validity and reliability could be difficult to achieve by using questionnaires or interviews. Thus, one may have assumed a potential threat of strategic answers if obtrusive measures should have been used. This called for use of multi methods and multi traits (triangulation), or use of unobtrusive measures (Webb, Campbell and Schwartz, 1966). In this study the data on the dependent variable has been collected with unobtrusive measures by content analysis. The independent variables have been collected as secondary data.

*Content analysis* has been defined as a research method that uses a set of procedures to make valid inferences from a text (Weber, 1990). Content analyses classifies textual material by reducing it to more relevant, manageable bits of data. Content analytic procedures operate directly on text or transcripts of human communications. Control in organisations is closely tied to communication and information. Compared to techniques such as interviews or observation, content analysis yields unobtrusive measures in which the sender or the receiver of the message is unaware that it is being analyzed. This was assessed as enhancing the validity in this study relative to using surveys, interviews or observations. However, there is no single right way of doing content analysis, and the method is both difficult and time-consuming if it is to be done well.

#### **Municipal annual reports**

Data collection on the dependent variable was performed by content analysis of texts in

municipal annual reports. Municipal annual reports have been extensively studied by content analysis in the empirical performance measurement literature, cf. table 2. Also financial annual reporting in the new institutionalism perspective (Mezias, 1990) and governmental accounting disclosure in a public choice perspective (Giroux, 1989) have been studied. There were several arguments for choosing the annual report as object for study. First, annual reporting represents a relatively routine, and maybe also an important, behaviour in large bureaucratic organisations. Second, the reporting process involves many of the organisational stakeholders including management, representatives, employees, the accounting profession, suppliers, and regulatory bodies. The processes cover phenomena both at the individual, organisational and inter-organisational level. Third, the data are public and accessible, and regarding much of the information conveyed, probably also fairly reliable. Fourth, by using annual reports it is possible to test reliability. Fifth, by using archival data the data sources are not affected by the measurement and data collection processes as could have been present in observations, interviews, or in surveys. Thus, any information obtained from archival records could still have been used symbolically or strategically, but not as a consequence of the measurements of my study.

*A priori* I assumed that there is a close resemblance between information revealed in the annual reports for municipalities and information used in the municipalities' management control, and closer resemblance between such information in public sector, non-profit organisations than in firms. Public sector annual reports commonly report statistics, metrics and judgements on many issues not only for the representatives as the primary principal, but for many constituencies and stakeholders. Since much decisionmaking in public sector is not based on prices, such information may assist the different stakeholders in their influence activities in order to affect resource allocation, assuming that the representatives make the final decisions in order to optimise social welfare under bounded rationality. Thus, public sector annual reports may be less clear-cut external reporting only relative to annual reporting in firms. There is also some support in the literature in order to state that information systems generally affect management control (Swieringa and Weick, 1987). Thus, I assume that public sector annual reports are relevant as data source for management control information in that context. A counter argument is that information is collected and used for external symbolic purposes and is loosely coupled to internal organisational control. However,

this assertion is questionable and may furthermore also be fully compatible with use of information also for internal, instrumental purposes (Donaldson, 1995; Stinchcombe, 1997). The question if annual reports resemble data used for management control remains however an empirical question.

Municipal annual reports have been said to be an innovation in Norway in 1984. I am, however, aware of the fact that an annual report from a municipal hospital did already exist for the fiscal year 1949–50. Furthermore, average costs, capacity utilisation and numerous statistics were documented in this report (but no financial statements). However, in this thesis it has been assumed that extensive use of municipal annual reports readily available for study, has not been present before the 1980s. In 1989 260 or 56% of all Norwegian municipalities published annual reports (Mellemvik and Olson, 1996). It is also likely that the number of municipalities using performance measurement is less than the number of annual reports. One also has to consider the time span since PIs were begun implemented in Norwegian local government in the mid 1980s. In 1996 it was over 10 years since innovation with municipal annual reporting was reported started and major research and development projects of municipal performance measurement were mounted (Johnsen, 1999). Collection of 1996 annual reports may therefore have provided relevant data on performance measurement as a dependent variable, and also variability in the independent variables.

### **Classifications and frequencies**

A central idea in content analysis is that the many words of the text are classified into much fewer content categories. To make valid inferences from the text, it is important that the classification procedure be reliable in the sense that it is consistent: Different people should code the same text in the same way (inter-subjectivity). However, organisational control as research topic is inter-disciplinary. Evidently, this criterion is difficult to fully satisfy. As inter-subjective agreement only exists for the most obvious aspects of communication, or only for a few people that happen to share the same cultural and sociopolitical perspective, shared meanings are not a presupposition for content analysis. Furthermore, Krippendorff (1980) argued that since high reliability is a requirement for high validity but does not assure it, standards for validity are clearly more powerful and hence preferable to standards of reliability. A variable is valid to the

extent that it measures or represents what the investigator intends it to measure. Therefore, it has been laid much emphasis on making the variables valid, making the data reproducible, and enhancing reliability by using an additive index. The measurement has been discussed in detail in the measurement sections.

To enhance validity and reliability, general guidelines regarding data collection for content analysis have been followed (Krippendorff, 1980; Weber, 1990). First, based on theory and the literature review, categories were defined and a registration form was developed into a research instrument. A guide with definitions of all categories used was written as a supplement to the registration form. The instrument for the dependent variable was furthermore tested by the author in a pilot study encompassing all the 18 Norwegian counties with satisfactory results. Data collection for the main study has been carried out by me and 13 graduate students of management and public administration, but with the author conducting the bulk of the work. The data collection phase for the municipal data began with the author first coding one municipal report. Several measures were then taken in order to enhance the intercoder reliability. A copy of this annual report together with a copy of the employed registration form used for this first annual report, and the guide encompassing all categories with definitions, were then provided to all the participants in the data collection. All coders were furthermore briefed before the data collection, and all coders could reach me during the data collecting stage in order to clarify upcoming issues.

The dependent variable, performance measurement, comprised frequency counts of both PIs and verbal conclusions on performance. The measurement of PIs was an extension of previous used approaches as reported in parallel studies (Pollitt, 1986; Smith, 1988; Boyne and Law, 1991; Palmer, 1993; Haselbekke, 1995; Hyndman and Anderson, 1995; Alford and Baird, 1997; Boyne, 1997; Johnsen, 1999). The seven categories of PIs were capacity utilization, partial productivity ratios, indexes of standard or quality, average costs, distribution ratios, finance ratio (full cost ratios), and coverage of needs ratios.

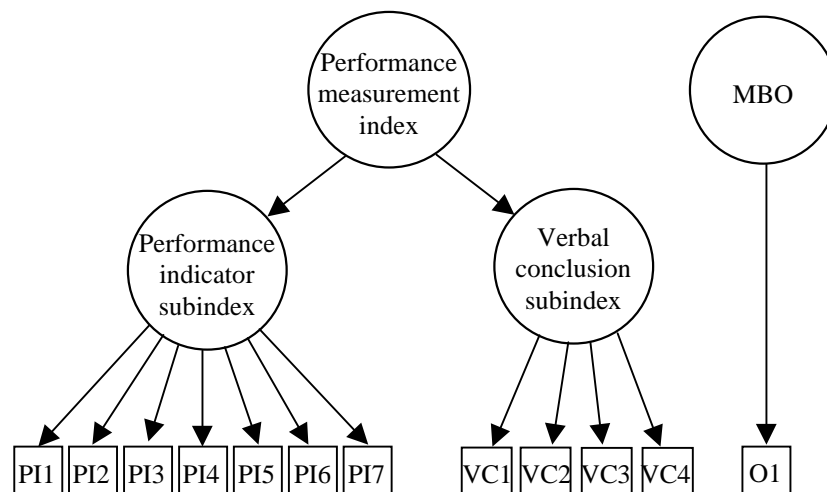
Preceding approaches to empirical studies of performance measurement have only counted PIs. However, I have also measured text elements as sentences and paragraphs in addition to ratios and numbers. Ouchi (1977) stated that the literature on organisations had not clearly distinguished control and structure from each other. *Structure* was explained as vertical and horizontal differentiation, centralization and

formalization. *Control* was defined as a process where behaviour and outputs are measured, monitored and evaluated, preconditioned by factors which influence the reliability and validity of such comparisons, and is distinct from structure. However, other authors (Meyer and Rowan, 1977; Pfeffer and Salancik, 1978; Pfeffer, 1997) did not distinguish structures from processes in organisational control. For instance, it could be misleading to separate performance measurement into structure and process because monitoring through evaluation, feedback and negotiations based on PIs (process) may be as substantial for organisational control as the formal act of reporting and disclosing PIs (structure) in itself. Practical consideration regarding limitation of space in the annual reports may enhance the use of verbal summary conclusions rather than presenting numerous and proliferating PIs only, which nevertheless changes over time due to the running down process of PIs. In this study, performance measurement was therefore measured as an additive index comprising both the sum of frequencies of the seven categories of quantitative PIs, and the sum frequencies of Kleven's (1993) four categories of verbal conclusions regarding performance in municipal annual reports: Policy statements, conclusions regarding needs, evaluations, and neutral statements. The concurrent use of categories both for PIs and verbal conclusions in a performance measurement index has not been formerly employed in the empirical literature.

In accordance with the research practice on public sector performance measurement, only information outside the financial statements were analyzed. Albeit models as accrual accounting may be fully feasible for measuring financial accountability and inter-temporal transfers of financial wealth, the use of such control models for measuring performance regarding effectiveness in non-profit organisations do nevertheless not make much sense (Simon, 1947/1997; Anthony, 1989). In many for-profit organisations accounting models may serve both functions of accountability and performance measurement reasonably well and especially on divisional and aggregate organisational levels. Non-profit organisations, on the other hand, have to rely on non-financial performance measurement in order to be able to make any qualified judgments about output and performance, if input control, rules, clan control and political control are to be supplemented.

The sum of frequencies (category counts) of the use of the seven categories of quantitative PIs and the four categories of verbal conclusions comprised an additive performance measurement index, cf. figure 5. An *index* is a composite measure of two

or more items as indicators. Indexes differ from scales by less rigour in their construction. Indexes may be constructed by mere accumulation of scores, and do not require the underlying principle of uni-dimensionality and such rigorous test of validity and reliability as most scales do (Frankfort-Nachmias and Nachmias, 1992). Thus, only scales which depend on one or more latent variables are to be tested with reliability coefficients from the classical test theory. Two or more cause indicators of a latent variable may not need to correlate. They can have a zero or even an inverse association (Bollen, 1989). Variables which cause a latent variable are not covered by classical test theory and popular reliability coefficients as Cronbach's alpha are in such cases not valid. However, also indexes, for instance based on content analysis data, are subject to issues regarding reliability and validity (Weber, 1990). The PI sub-index in itself may be conceived as a cause indicator where the sum counts of each specific, defined PI forms the PI sub-index. However, the performance measurement index only utilises the sum score of the PIs, together with the sum scores of verbal conclusions. I have therefore assumed that my performance measurement index is an effect type indicator where the two items of PIs and verbal conclusions reflect two central dimensions of the phenomenon of interest: measurement and evaluations respectively.



**Figure 5.** A tree model of the performance measurement index and the MBO measure

In the beginning of the data analysis, two of the most influential observations were found to have been registered early in the data collection phase, which had extended



over a period of one and a half years. An influential observation has a disproportional influence on one or more aspects of the regression estimates and may encompass extreme values, leverage points and outliers (Hair, Anderson, Tatham and Black, 1992). The two annual reports were then recoded to test intertemporal stability and accuracy. *Stability* is the extent to which the results of content classification are invariant over time. *Accuracy* is the extent to which the classification of the text corresponds to a standard or norm and is the strongest form of reliability in content analysis (Weber, 1990). The annual report which had the highest score in the first coding, got 3% less frequencies in the recoding. The annual report which had the lowest score in the first round, got 12% more frequencies in the second round than in the first round. Only a few frequencies in both annual reports were reclassified into another subcategory in the recoding. This was found to be satisfactory both with respect to stability and to accuracy.

The measurement of control models also included management by objectives and self-control (MBO). Drucker (1954, 1976) asserted that the three pillars of MBO were formulation of objectives, employee participation, and evaluation of results. Rodgers and Hunter (1992) asserted that MBO consisted of goal setting, participative management, and objective feedback. Thus, MBO and performance measurement are not identical as performance measurement does not necessarily rely on formulations of goals or extensive employee participation (Johnsen, 1999). Moreover, objective feedback in MBO is not necessarily provided by PIs exclusively. Rodgers and Hunter (1992) provided a meta-analysis of 30 studies of MBO in the public sector and concluded that MBO had a positive impact on productivity in all the public sector agencies studies. At present no such study exists for performance measurement. MBO is in my study measured as frequency counts of judgements on achievements of objectives, cf. figure 5. Thus, only one of the three components of MBO was measured by this index. The inclusion of MBO in the study was done to provide a multi-trait approach in measuring public sector organisational control. This also provided a means for checking the construct validity the performance measurement index. *Construct validity* means that a measure is correlated with other measures of the same construct and uncorrelated with measures of dissimilar constructs.

The Cronbach's alpha reliability measure for the performance measurement index was .54 with PIs and verbal conclusions included as two items. A Cronbach's alpha

reliability measure equal to or above .70 is judged as a 'good' reliability and values of .50 as minimum level of acceptable reliability (Hair et al., 1992). Thus, it could be assumed that the reliability of the performance measurement index was satisfactory. The index would have declined to .40 if the judgements of achievement of objectives item was included in the index, supporting the notion of performance measurement and MBO as two distinct models. Thus, the index seems to be sensitive enough to distinguish between the phenomena of interest (Krippendorff, 1980).

### **Normality and transformations**

Content analysis data are unlikely to be either univariate or multivariate normal as many data analysis techniques, including regression, make an assumption for proper use. However, additional research is needed to assess whether the robustness of such statistical methods really compensates for the deviations of most content analysis data from the Gaussian normal distribution (Weber, 1990). Such research is far beyond the scope and limits of this thesis. However, as far as it has been foreseen, the issues of normality and statistical assumptions have been dealt with in accordance to considerations of the concepts and mechanisms of the theories involved, and in accordance to a theoretical consideration of a basic content analytic problem of how frequencies are to be measured.

In quantitative content analysis one basically assumes that the more a text contains of a particular category, say by counting its frequencies, the more the text is concerned with this issue. However, it could be reasoned that the initial mention of a theme or issue requires more effort or energy than a successive one. Economically this relates for instance to monitoring systems, measurement competence and routines which could be regarded as requiring an initial organisational specific investment. The investment required to make the initial measurements and monitoring, and the benefits obtained by it, may be substantial, but the proceeding performance measurement may have a positive but decreasing marginal value. If initial efforts require more energy than proceeding efforts, then it may be valid to put heavier weight on the first frequencies, or discounting the latter frequencies. This may also be achieved by transforming the variables, say by taking the square root of the number of frequencies. As with the issue of content analysis data, normality and using certain data analysis methods, also this measurement

issue is at present underresearched (Weber, 1990). However, this issue seems to be relevant for performance measurement, and will be further addressed in conjunction with the linearity assumption of regression.

### INDEPENDENT VARIABLES

The independent variables were chosen in order to operationalise the concepts employed in the hypotheses developed in chapter 4.

#### **Asymmetric information**

On the basis of public choice and agency theory, one may assume that the degree of asymmetric information is dependent upon size. On these reasons, manyear municipal employees (bureaucracy size) has been used as indicator for asymmetric information. Secondary data statistics on municipal manyear are readily available, but not data on municipal managers with separate and identifiable budgets, as Niskanen (1971) defined as bureaucrats. Therefore, in this study bureaucracy size and hence asymmetric information has been measured with the variable municipal manyear, with data for municipal employee manyears in 1996. Gordon and Smith (1992) have developed a measurement instrument for studying the effects of asymmetric information and postauditing capital investments on firm performance in a study of management control systems design. Asymmetric information was measured as an index comprised of firms size, diversification of product lines, degree of company internationalisation, and variation in the firm's earnings. Both company internationalisation and variation in firms' earnings are irrelevant for local governments. Diversification of services is relatively less relevant in Norwegian local government as most municipalities produce the same services albeit they are free to produce services which are not prohibited by law ('negative restriction'). Thus, the use of a size variable to measure asymmetric information is corroborated by practice in the empirical, organisational control literature.

### Slack

Some studies have used expenses *per capita* as a proxy for municipal productivity. A *proxy variable* is a variable assumed to be correlated with the concept of interest (the latent variable) that is used to measure the concept when it can not be measured directly (Berry, 1993). Bollen (1989) remarks that such observed variables have a variety of names as manifest variables, measures, indicators, and proxies. Using proxies may cause two problems of measurement. A proxy variable may have measurement errors in measuring the true score of the proxy. Furthermore, the proxy may reflect the concept of interest imperfectly. This can have implications for empirical analysis. In for instance multiple regression, such measurement errors stemming from using proxies may not only affect the variables with errors, also the regression coefficients without errors may be affected. As there are severe measurement problems with expenses *per capita* as productivity indicator, the data on free disposable municipal income have been judged as the most conceptual valid slack indicator. In this study organisational slack has therefore been measured with free disposable municipal income variable as an indicator.

The free disposable municipal income variable has recently been developed by Langørgen and Aaberge (1998) in Statistics Norway partly as a response to common claims that local government statistics have been of low validity and reliability. The free disposable municipal income variable was estimated based on detailed municipal accounts and community characteristics for 426 municipalities in 1993. Documentation of the microeconomic model used to estimate the free disposable municipal income and the mandatory municipal expenses, are given in Aaberge and Langørgen (1997). *Free disposable municipal income* was defined as income in excess of what is mandatory expenses according to laws and norms given by the Norwegian parliament, *Stortinget*, and the Norwegian government. The *restricted municipal expenses* were estimated as heterogeneous 'minimum production (operating) costs' disaggregated on different municipal services each constrained by exogenous factors as population's age group served by the services, socio-demographic variables, variables assumed to control for economy of scale, and climatic factors, varying from services to services. (Cf. table 3.1 in Langørgen and Aaberge (1998) for a detailed account. See also Boyne (1995) for a critique of the use of certain variables, commonly inhabitants, to explain economy of scale in municipal service production.) Population density, centrality, dummy-variable

for municipalities with less than 5000 inhabitants, and the inverse of number of municipal inhabitants, were included in the demographic variables. The inverse of number of inhabitants is a convex, decreasing function of the number of inhabitants. The sum of the free disposable municipal income and the municipal income with restricted or mandatory use according to laws and norms, would comprise the endogenous municipal budget constraint. Municipal operating expenses, budget surplus and the fee income were defined as endogenous variables in the model. In Norway there is a tax on labor input in the production process, and this tax is geographical differentiated on five levels due to regional development policies. Thus, in rural regions, the lowest tax was zero, while in the most urban regions this tax was above 10% in 1994. These labour input taxes were not detracted from the municipal accounts data. This means that the free disposable municipal income may have been underestimated for the municipalities with the smaller tax rates, mostly smaller and non-central municipalities. Free disposable municipal income has been measured as an index. Free disposable municipal income in 1994 per capita, measured in 1993 NOK, was divided on the mean for all the municipalities save for Oslo (434 municipalities) (Langørgen and Aaberge, 1998).

As explained in chapter 4, the slack variable is an indicator for organisational effectiveness but in my study modelled as an independent variable. One may assume that slack and organisational effectiveness in preceding years are valid candidates for explaining organisational control structures in proceeding years. Furthermore, one may assume that municipal slack is not changing dramatically on the organisational level from one year to the next. The stability of the free disposable municipal income variable was measured by correlating the 1993 data with the 1994 data for all the municipalities save for Oslo. The computed correlation coefficient was 0.96 and the variable was judged to be relatively stable (Langørgen and Aaberge, 1998). This stability makes the free disposable municipal income variable a potential good candidate for measuring organisational slack. Also, there usually is a substantial time lag, at least three years, from a decision to implement or use organisational control models is taken, before such systems are implemented and subsequently used. This time lag may also be longer for relatively complex organisational control structures. Hence, lagging the variables is one means to avoid problems related to simultaneity in the models. The time lag between the measurement of independent variable slack in 1994 to measurement of the dependent

variable performance measurement in 1996, conforms to the underlying causal relations of the conceptual model.

### **Uncertainty**

Uncertainty has been measured partly as a dichotomous variable to be used in a bivariate analysis, and partly with organisational size as an indicator for complexity, to be used in multivariate analysis. Uncertainty in municipal services was measured as an ordinal level, dichotomous measure (see table 8). It was asserted that primary schools, health care and social services, and cultural services, had more uncertainty than central administration, housing, development of commerce and environmental planning, infrastructure services, and maintenance of roads. It is recognized that this is only sufficient as a preliminary approach to measuring uncertainty. However, some support for this approach may be found. Pettersen (1995) discussed characteristics of health services production in counties arguing for relative high uncertainty in that context. In economics of schooling the production function is not certain. E.g., it has not been found any relation between expenses per pupil and outcome (Hanushek, 1986). Furthermore, the bivariate analysis encompassing this variable is used only as a complement to other measures.

Organisational complexity with size as indicator has been used in former contingency theory explanations of uncertainty (Wildavsky, 1986). Organisational complexity was measured as municipal inhabitants per January 1, 1996, termed municipal inhabitants. Some studies have made an ordinal level measure of organisational size as variable. Borge and Rattsø (1993) divided the municipalities into two groups: Small municipalities with less than 5000 inhabitants, and large municipalities with 5000 inhabitants or more. They found that Norwegian municipalities and large municipalities showed a strong sluggishness in budget allocations. Organisational complexity and inferior voter control may contribute to more rigidity in large compared to small municipalities. Langørgen and Aaberge (1998) divided the municipalities into three groups: Small municipalities with less than 5000 inhabitants, medium sized municipalities with 5000 to 19,999 inhabitants, and large municipalities with 20,000 or more inhabitants. This division was chosen in their study to avoid categories with few municipalities. I have also used these categorisations in a bivariate analysis in my study

for the same reason. The interval breadth increases with size of the municipalities, at the same time as the number of municipalities in each category decreases. However, in the multiple regression analysis in this study, I have used municipal inhabitants as a proxy for complexity as a metric variable.

In addition to the dichotomous and the metric measures of uncertainty and complexity respectively, an organisational design variable may be warranted. Otley (1980) warned against making inferences about links between contingent variables and information systems without explicitly considering the intervening variables of organisational design. A core contingency theory design parameter is decentralization. Formalisation and specialisation are other core organisational design variables. Decentralised municipalities may reduce complexity and thus uncertainty by gathering task information according to local needs and delegating decisionmaking to subordinates. Thus, larger organisations may of sheer complexity have so much uncertainty that output control is substituted with other control structures as budget control and decentralization. Data regarding a control variable for municipal organisational design has therefore been included. The data was collected from a municipal survey undertaken by Statistics Norway autumn 1996. An organisational design variable measuring degree of decentralization as a dimension of organisational efforts at reducing complexity, was judged to be a valid operationalisation.

Decentralisation has been measured as the number of municipal services which had decentralised administration in 1996. The services were categorised in primary schools, kindergarten, health services, social services, services for drug addicts, social services for children and youngsters, nursing services for elderly and disabled persons in their own homes, nursing services for elderly and disabled persons in institutions, and two 'other' categories. Thus, this variable may vary from 0 to 10. Data was collected by questionnaires. Unfortunately, only 141 of the municipalities in my population either were included or responded in this survey.

### **Ambiguity**

An unstable or weak ruling political coalition is assumed to increase goal ambiguity in the service provision relative to a stable or strong ruling political coalition. Due to the relative high degree of intraparty competition in local government, it may be more

relevant to study the formation or presence of political coalitions than to focus on parties in themselves. In the Norwegian municipalities the political parties are proportionally represented in the municipal council. This facilitates compromises and bargaining rather than dominance from the largest party, as the largest party only seldom has majority rule in the municipal council. The public finance literature has employed the Herfindahl-index to measure party concentration (Stigler, 1972). The Herfindahl-index is defined as:

$$H = \sum_{j=1}^P S_j^2$$

where  $S_j$  is the share of representatives from party  $j$  in the municipal council, and  $P$  is the number of parties. The Herfindahl-index takes the value 1 when a single party holds all seats in the council. The minimum value is  $1/P$  when the seats are equally divided among the  $P$  parties. The relationship between party concentration (political leadership) and presence of political coalitions (ambiguity) is unknown. The presence of political coalitions has therefore been explored as an indicator for ambiguity in municipal councils. To accomplish this, a dummy variable was employed with value 1 if the mayor and the deputy mayor came from different political parties, and the value 0 otherwise. The value 0 was assumed to indicate little need for forming political coalitions and hence low level of goal ambiguity. The value 1 was assumed to indicate the existence of political coalitions and hence relatively more goal ambiguity. Although this variable is an indicator for ambiguity, it could also be connected to inter-party competition.

### **Power**

Organisational and political political power is a complex and multi-dimensional issue. Political power has been measured with three variables: Centrality of the municipality is used as a proxy for the municipal management's power. Representatives' leftist political preferences were used to measure power issues among the representatives. Percent municipal employees of all inhabitants aged 16–74 with an occupation was used to measure the bureaucrats' interest group power. The following discussion is an attempt to qualify these choices.



## Chapter 5: Method

Municipal management competence: One may assume that the chief administrative officer's and the senior financial officer's competence are organisational bottlenecks regarding performance measurement implementation. This could have been operationalised as their formal management education and professional experience. This calls for detailed survey data. As there are neither reliable population data on performance measurement projects or networks, nor a municipal management competence database available, a proxy for the management competence concept has been considered.

One may assume that skilled and competent managers are relatively more available in larger labour markets than in smaller labour markets. If so, the centrality of the municipality may be a proxy to measure availability of management skills and competence. There are many counter-arguments to this proxy. For instance, there may also be more keen competition for skilled and competent managers in central labour markets which may not favour municipalities. In non-central municipalities, managers with less formal competence may stay longer in the municipality and hence become as skilled and competent as managers with more formal competence. Furthermore, non-central municipalities may rely more on informal control models than formal control models as performance measurement. On the other hand, non-profit organisations are expected to mix different control models simultaneously (Ouchi, 1979; Meyer and Gupta, 1994). Hence, centrality may be of importance for the availability of crucial management skills and competence especially in the case of formal control models. On these reasons the municipal's centrality has been used as a proxy in order to explore potential effects of municipal management skills and formal competence on performance measurement. The demographic variable municipal centrality was based on Statistics Norway's official 1990 classification of the municipalities into seven categories on an ordinal level of measurement. The seven categorizations were made based on classification of the largest municipalities into three levels of regional centers, and commuting time to the nearest center for the remaining municipalities. The value 1 indicates lowest centrality and the value 7 indicates highest centrality.

Leftist representatives' political power in the municipal council: Leftism was measured as representatives belonging to either the Labor Party, the Socialist Left Party, or the Norwegian Communist Party as percentage of all the representatives of the municipal council after the 1995 municipal election.

Bureaucrats' interest group power: Power from interest groups may come from two kinds. The inside group may be associated with local government employees, professionals and trade unions. The outside group may be associated with clients of local public services. Borge, Rattsø and Sørensen (1995) studied rigidity (sluggishness), of local government resource allocation. Political pressure of interest groups and media was measured as perceived by politicians by surveys. The results showed that pressure groups related to primary education explained an important part of the sluggishness observed. Pressure groups promoting kindergartens and health care stimulated reallocations. Pressure through the media had more or less the same effect as special interest groups. Borge, Rattsø and Sørensen (1995) argued that given the empirical problems of measuring the multi-dimensional activities of interest group connections to the political system, alternative strategies to this documentation would have been fruitful. Another means to measure power was by different characteristics of the relevant interest groups, which has been chosen in this study.

The percentage of municipal employees of all employed inhabitants aged 16–74 in the municipality last quarter 1997, was used as proxy for the power of municipal bureaucrats. It is assumed that this percentage is relatively stable over time, such that this variable may serve as a proxy for the percentage of municipal employees of all employed inhabitants aged 16–74 in the municipalities also in 1996. Borge, Rattsø and Sørensen (1995) recommended to study the interaction between the interest group indicators and the size of the relevant client group in the empirical analysis. However, the percentage municipal employees variable is relative to the overall municipal employment.

Municipal dependence on local taxpayers: Dependence on local tax payers have been put forward as explanation for monitoring in local government. The strength of local taxpayers was measured as ordinary income taxes *per capita* January 1, 1996.

### **Data sources**

All data (except the dependent variable) were collected as secondary data (archival data) from official statistics. Data regarding organisational slack, the free municipal disposable income variable, were obtained from Statistics Norway (Langørgen and Aaberge, 1998). These data were newly developed in 1997–98 for the fiscal year 1994.

## Chapter 5: Method

Statistics Norway had in 1997 plans to develop such data also for the following years, but this has been postponed. Thus, only data for 1994 were available.

Data regarding municipal inhabitants, centrality, number of representatives and political party affiliation in the municipal councils and municipal employee manyears, were available through local government election statistics, the municipal data base, and the municipal organisation data base from the Norwegian Social Science Data Service (NSD) with data originally delivered from Statistics Norway. These data were also used to compute two new variables which have been used in this study as indicators for the goal ambiguity and political power concepts. First, the dummy variable political coalition was created to measure the existence of ambiguity in the municipal council. Second, the leftism variable was computed as measuring the proportion of leftist representatives in the municipal councils after the 1995 municipal election. Furthermore, the secondary data used in developing the VFM auditing and financial auditing indexes, also came from these data sources.

Data on ordinary income tax *per capita* and the data on the political variable on percentage municipal employees, were obtained from official publications published by the Ministry of Local Affairs and Regional Development in 1998.

### DATA ANALYSIS

The measurement models of the three models hitherto employed in this thesis to explain local government performance measurement could be specified in a general model as:

$$Y = f(\text{model I, model II, model III})$$

where Y is the dependent variable performance measurement, model I is the agency theory/public choice model independent variables, model II is the contingency theory and new institutionalism model independent variables, and model III is the political model independent variables. A full model encompassing models I through III may be labelled model IV.

### Modified regression analysis

The dependent variable, the performance measurement index, is a metric, interval level measure. The independent variables have been measured both on nominal, ordinal, and interval levels of measurement. However, such variables may be used in regression analysis. Multiple regression has been chosen because of its relative simplicity, and its ability to fully utilize the metric, dependent variable.

A general multiple regression equation used to estimate the regression coefficients ( $\beta_i$ ) could be on the form:

$$(1) Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + e$$

where  $Y$  is the dependent variable,  $\beta_0$  is the intercept,  $\beta_i$  is the regression coefficient for variable  $X_i$ , and  $e$  denotes a random disturbance (error) term. In this study a modified regression analysis (MRA) is used. A *modified regression analysis* is a specific application of multiple regression analysis where the regression equation also contains an interaction term (Hartmann and Moers, 1999). This interaction term also often utilises a ‘dummy variable’ approach which is using a nominal (or ordinal) level variable which only takes on the values 0 or 1. This technique is some places termed as an instrumental variables (IV) approach. Thus, a simple, modified regression analysis equation could be on the form:

$$(2) Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + e$$

In equation (2) the terms  $X_1$  and  $X_2$  are the main effects of variables  $X_1$  and  $X_1$  on  $Y$ . The product ( $X_1 X_2$ ) is said to be the moderating effect of variable  $X_2$  on the relationship between  $Y$  and  $X_1$ . However, when interaction terms are included in the regression equation, the lower-order effects should be ‘partialed out’ by including them in the regression equation. For instance, equation (2) would have been incorrect if the interaction term was included but not the lower-order effect of variable  $X_2$ . To establish the existence of an interaction effect, a hierarchical regression analysis is performed. First an analysis with the main effects is undertaken, then a second analysis with both the main and the interaction term is run. Differences in the parameter estimates then

indicate the presence of interaction effects. It should be noted, though, that the inclusion of interaction terms should be guided by theory, and that the inclusion of interaction terms of higher than second-order, is in general not recommended.

### **Applications of significance tests**

Significance testing is one of the most used and maybe also one of the most useful techniques in quantitative analysis. A significance test is a test of a hypothesis (Mohr, 1990). The classical technique of inference was developed to make inferences to unobserved, population properties from observed, random samples drawn from the population. A second kind of inference is primarily used with a randomised, controlled experiment, and one wishes to state that a relation probably is causal. This may be warranted as research often is concerned with judgements regarding if a relationship or property is worth further thought and research efforts, often in competition with many other relationships and ideas.

A standard conception of the use of significance tests is that if a population could be tested directly, no inferences would be necessary, and any difference between the means or any correlation between variables would support the hypothesis (Frankfort-Nachmias and Nachmias, 1992). Lindsay (1995) stated explicitly that samples must be randomly selected in order to use the test of significance validly. However, many researchers use the significance test also for non-random samples. Mohr (1990) has discussed the use of significance tests in detail.

In the 'econometric-modelling' function tests of significance are used to assess the probability that a parameter estimate of a certain magnitude might be attributable to the random-disturbance component of a model rather than indicating a true causal effect. This function is called so because it is most common within the discipline of economics, but it is also used in other disciplines. A *parameter* is defined as a summarising property of a collectivity when that collectivity is not considered to be a sample. A *statistic* is defined as a summarising property of a collectivity when that collectivity is considered to be a sample. In the econometric-modelling function no random sample from a population or randomisation in experimental design is used, only some collectivity is observed. The test is used to assess: a) if a relationship is so large that it probably could not have been the entirely misleading result of the random disturbance term, but rather

may be judged to be a 'true causal' impact, or b) if the relationship is so small that it might well be due to the random-disturbance component and thus no assumed causality exist. However, in order for the econometric-modelling function of significance test to apply, the model must be correctly specified such that all that is left out is the random error term. This condition hardly ever exists in practical econometrics.

A second use of significance tests in population studies is the strength-of-relationship function. This function is seldom acknowledged to be used, not commonly referred to in textbooks, albeit it is probably the most common use of significance tests of all. This function gives the probability, no matter what design or nondesign has been employed, that one would have obtained a statistic in a certain range of magnitude if one had actually implemented a randomisation or random sampling procedure. Its popularity and versatility may be due to the need for a convenient translation of strength of relationships into the common language of probability.

Caution is necessary in use of significance tests because of sample size. Almost all relationships are significant in very large samples. The test of strength-of-relationships then is only helpful in small and moderate sized samples. Furthermore, in addition to randomness, relationships may also stem from spurious or coincidental circumstances. In studies of collectivities as in this thesis where random sampling or randomization have not been employed, only the strength-of-relationship function applies. It is then only a rough tool and must be employed with consideration to the above mentioned limitations. Significance tests nevertheless can only inform that a difference appears real. It can not explain what caused the apparent difference. Thus, the main test must, for all practical concerns in empirical analysis in organisation theory, include ruling out plausible, alternative explanations to the proposed explanation as formulated by the researcher through the hypotheses. Furthermore, instead of a research strategy of seeking significant results within single studies, significant results could be judged by obtaining reproducible results from performing several studies under different conditions within a research programme. An alternative criterion to significance tests is then whether the same model holds for many sets of data (Lindsay, 1995).

## LIMITATIONS AND DELIMITATIONS

Several limitations in this study have been addressed throughout the thesis. Here only what has been deemed as the most severe shortcomings, shall be highlighted.

First, the reliability of many of the indicators employed in the empirical studies could have been improved. This relates both to the secondary data obtained from official statistics regarding the independent variables, use of proxies, and measurement problems inherent in the content analytic approach which have been used to measure the dependent variable. Although I have judged the construct and internal validity to be satisfactory throughout the study, several of the variables have measurement errors affecting reliability. Specifically, the use of size-related variables as indicators in accounting research and organisational studies has been criticised (Kimberly, 1976; Bujaki and Richardson, 1997). However, I have conformed to Kimberly's three suggestions: First, that different relationships between aspects of size and dimensions of structure should be posited based on theoretical considerations (for instance asymmetric information and complexity). Second, aspects of size may vary as a function of organisational type (for instance decentralised versus centralised organisations). Finally, to conceptualise organisations which leads one to ask dynamic questions (for instance anticipating resistance and not only symbolism).

Furthermore, I have used an extension of previous content analysis performance measurement indexes developed for public sector organisations for the PIs item of my dependent variable. However, the organisation and structure of municipal service provision is so varied that two hypothetical identical scores on such performance measurement indexes between countries, would not be comparable unless special efforts have been taken for making them comparable. I have not made such arrangements. Hence, the variable scores should not be compared across countries, or even over long time periods within the same country, without great caution in the interpretations.

Second, several issues regarding internal validity may be questioned. For example, it has been suggested that a high level of organisational slack impedes the principals to employ performance measurement in order to enhance organisational learning and thus effectiveness. However, such behaviour may also be consistent with an explanation that slack triggers use of organisational control models which may symbolize rationality and effectiveness, and thus sustain both legitimisation and the initial slack. The empirical

results will not provide any critical test of the rational, economic approach to positive theory on political institutions versus symbolism as in the historical, sociological approach. The results have to be interpreted guided by theory.

Third, the empirical results may have limited external validity. The empirical studies in my project have all been undertaken in one national setting. Other countries could have specific contingencies which make direct inferences from my results to other countries invalid. For instance, it has been found that US municipalities which were led by mayors rather than professional city-managers, had relatively less developed organisational control systems (Ward, Elder and Kattelus, 1994). This result was also found specifically with regard to use of performance measurement in 1997 in US municipalities with 25,000 or more inhabitants (Poister and Streib, 1999). All Norwegian municipalities are led by a chief administrative officer. This could have increased the sophistication of performance measurement in Norwegian municipalities relative to countries without professional, municipal top-management. This may reduce the generalisability of the empirical findings to some countries. One should therefore be careful in generalisations of the findings to other specific settings, though generalisation of the findings to a conceptual level seems to have been reasonable qualified. Anyway, the results in this study may complement the existing literature on public sector performance measurement as much of the previous reported studies have been conducted in contingencies with strong central government regulation or mandatory use of performance measurement in the federal and state government, as in the UK and in USA. See however Ramberg (1997), Poister and Streib (1999) and Streib and Poister (1999) who also have studied non-mandatory use of performance measurement in local government.

### SUMMARY

This study attempts to test specific hypotheses from agency theory/public choice, contingency theory, institutionalism and the resource dependence perspective. A cross-sectional, planned variation design with Norwegian local government as setting was chosen, as this seemed to be suited for testing the hypotheses. The population was defined as 176 municipalities including all 39 large municipalities in order to secure



variability in the independent variables. The usable population turned out to be 162, which was judged to be satisfactory for the multivariate analysis. However, data from 1995 for all the 18 counties were used in a pilot study to test the research instrument for measuring the dependent variable, performance measurement, regarding reliability and validity. The main study has used the Norwegian municipalities as population. All data reported in this thesis are from the municipalities.

The dependent variable, performance measurement, was measured with an additive index comprised of two items. The data on this dependent variable was collected by content analysis of municipal annual reports for 1996. The Cronbach's alpha reliability measure for the index was only .54, but above the threshold of .50 for satisfactory index reliability.

The agency theory/public choice model independent variables were municipal manyear as indicator for asymmetric information, and free disposable municipal income as a measure of organisational slack. The contingency theory/institutionalism model had two variables. The first variable was uncertainty which was measured with three indicators. The first indicator was a dichotomous variable divided into high and low uncertainty in the municipal services. The second indicator for uncertainty was municipal inhabitants as a proxy for complexity. Complexity as a function of organisational size is assumed to positively affect uncertainty. The third indicator for uncertainty was an organisational design variable where it was assumed that municipal decentralisation is used under high degrees of complexity and uncertainty. The second contingency variable, ambiguity, was a dummy-variable for political coalitions in the municipal council.

The power model had four variables. First, municipal management competence was measured with municipal centrality as a proxy. It was asserted that formal skilled management control competence may be more accessible in centrally located municipalities, which may enhance management power on behalf of the chief administrative officer as principal. Second, representatives' political power was measured with leftism. Third, bureaucrats' interest group power was measured as municipal employees' numerical strength relative to all employed inhabitants in the municipality. Lastly, municipal dependence on local taxpayers was operationalised.

Modified regression analysis was chosen as estimation technique for the models. It was also asserted that square root transforming the dependent variable by could remedy

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certain content analysis measurement problems related to counting frequencies which otherwise could give too little credence to initial mentions of some issue relative to successive mentions. Such data transformations of the independent variables may also remedy certain violations of the regression assumptions, most notably linearity.

## 6 Results

This chapter documents the results of the analyses in relation to the hypotheses presented in chapter 5. However, first a univariate and a bivariate description of the population for my study is provided. Then the estimation of the four regression models is documented. The next sections address the findings from the analyses. The analysis is ended by a simple case study of the 12 municipalities which were ranked highest and lowest on use of performance measurement. The chapter is rounded off with conclusions from the results.

### DESCRIPTION OF THE POPULATION

Table 5 presents the median, mean, standard deviation, minimum and maximum values, skewness and kurtosis for all the independent as well as dependent and control variables. Of the responding 165 municipalities, 98% disclosed annual reports in 1996. The theoretically defined, planned variation population consisted of the 162 municipalities which disclosed annual reports. The municipalities had on average 627 manyears, but half of the municipalities had 303 manyears or less. The mean level of free disposable municipal income in 1994 in the population data for this study was almost identical with the mean for all Norwegian municipalities in 1994. However, in the population for this study half of the municipalities had only 67% or less of the mean level of free disposable municipal income.

The 162 municipalities varied in size from 214 to 224,000 inhabitants with a mean of 15,900 inhabitants. Note that many empirical studies from the US due to data availability only study municipalities equal to or larger than 25,000 inhabitants (Poister

## Chapter 6: Results

and Streib, 1995, 1999; Streib and Poister, 1999), 50,000 (Rubin, 1988), or even only municipalities with 100,000 (Giroux, 1989) or more inhabitants. This reduces the external validity of the findings in this study to some of the other results reported in the literature. At least half of the 162 municipalities had mayor and deputy mayor from different parties.

Most of the municipalities were centrally located. The most leftist municipal council had 70% leftist representatives, but half of the municipal councils had 32% or less leftist representatives. The mean percentage of municipal employees of all employed inhabitants aged 16–74 in the municipalities was 20% in the first quarter of 1997. The smallest and largest values were 13 and 43% respectively. The mean ordinary income tax per capita in 1996 was NOK 11,410.

The mean score on the performance measurement index was 68 frequencies. The index varied from 0 to 292, however only 1 municipality scored 0 on this index. Regarding PIs 12 municipalities had no occurrences of PIs in their annual reports in 1996. Thus, 99% of the population used some sort of performance measurement as operationalised in this study, and 93% used some sort of PI. However, use of PIs or verbal conclusions does not automatically imply that the municipalities in question actually used the performance measurement model as formal organisational control. Reporting of local government statistics and verbal conclusions could be used separately and without any connections with the performance measurement model. The mean scores of the PI and verbal conclusion subindexes were 14 and 54 frequencies respectively.

The MBO index showed a mean of 35 frequencies. 83% of the municipalities were found to use the MBO model in their annual reporting. Half of the municipalities responded much or some emphasis on at least 2 of the 5 items in the VFM auditing index. Half of the municipalities responded much or some emphasis on at least 1 of the 2 items of the financial auditing index.

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**Table 5.** Descriptive statistics

Variable	Measurement	Median	Mean	St.dev.	Min.	Max.	Skewness <sup>c</sup>	Kurtosis <sup>d</sup>	
<i>Independent variables</i>									
1	Municipal manyears 1996	Metric (N=162)	303.50	626.67	(1052.59)	18	9348	5.15	34.68
2	Free disposable municipal income 1994	Relative to mean. Metric (N=162)	0.67	1.01	(1.45)	0.03	12.66	5.05	31.53
3	Municipal inhabitants 1996	Metric (N=162)	7009.5	15875.0	(25818.93)	214	22430	4.73	30.34
4	Decentralisation 1996	Number of decentralised services Non-metric (N=141)	0	6	( )	0	8	2.11	3.91
5	Mayor and deputy mayor from different parties	Dummy variable for political coalition: 0=No, 1=Yes (N=162)	1.00	–	–	1	0	–	–
6	Municipal centrality	Seven categories: 1=low, 7=high centrality. Non-metric (N=162)	6.00	5.07	(2.33)	1	7	-0.83	-0.92
7	Leftist representatives in the municipal council	Percentage. Metric (N=162)	0.32	0.34	(0.13)	0.00	0.70	0.30	-0.12
8	Municipal employees 1997 of all employed inhabitants	Percentage. Metric (N=162)	0.19	0.20	(0.05)	0.13	0.43	1.83	4.50
9	Income tax <i>per capita</i> 1996	Norwegian kroner (NOK) (N=162)	10343	11410	(4535)	7694	44787	4.76	27.05
<i>Dependent variables</i>									
10	Performance measurement index <sup>a</sup>	Additive index of PIs and verbal conclusions. Metric (N=162)	62.00	68.10	(48.46)	0	292	1.75	4.89
11	Performance indicator subindex <sup>a</sup>	Frequency counts of 7 categories of PIs. Metric (N=162)	9.00	14.36	(18.64)	0	138	3.68	17.93
12	Verbal conclusion subindex <sup>a</sup>	Frequency counts of 4 categories. Metric (N=162)	50.00	53.73	(37.01)	0	180	1.20	1.86
<i>Control variables</i>									
13	Management by objectives (MBO) <sup>a</sup>	Judgements of achievement of objectives. Metric (N=162)	6.00	34.65	(68.31)	0	437	3.28	12.84
14	Value for money (VFM) auditing index <sup>b</sup>	Additive index of 5 dummy variables. Non-metric (N=138)	2.00	2.20	(1.35)	0	5	0.16	-0.64
15	Financial auditing index <sup>b</sup>	Additive index of 2 dummy variables. Non-metric (N=138)	1.00	0.72	(0.72)	0	2	0.44	-0.86

*Note.* All variables are untransformed.

a Frequency counts of text items (including ratios and diagrams) were collected by content analysis of Norwegian municipal annual reports 1996.

b The index is municipalities which responded much or some emphasis on different auditing activities in 1996 (coded 1, otherwise 0 on each of the items in the indexes). There were 5 questions related to 3 different VFM auditing activities: Control of budgetary approbation, control of cost efficiency, and control of allocative efficiency. The 2 financial auditing activities were accounting control and legal control. Data was collected by mailed questionnaires. The municipal officers' replies were obtained in co-operation with the senior municipal audit officer. (Source: Norwegian Social Science Data Service.)

c Skewness measures the symmetry of a distribution (often) relative to the normal distribution. A positively skewed distribution has relatively few large values that it tails off to the right. A negatively skewed distribution has relatively few small values. A skewness value outside the range of -1 to +1 indicates a substantially skewed distribution.

d Kurtosis measures the peakedness or flatness of a distribution compared to a normal distribution. Positive values indicate a relatively peaked distribution and negative values indicate a flat distribution.

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The Spearman rank correlation coefficients are given in table 6. Usually the Pearson's correlation coefficient is reported in conjunction with multiple regression analysis, also in the cases where some of the data are on an ordinal measurement level. However, because several of my data were severely skewed (non-normal distributed), I have chosen to present the Spearman rank order correlation coefficient instead of the Pearson's correlation coefficient. The interpretation of the Spearman rank correlation coefficient  $r$  ( $\rho$ ) is the same as for the Pearson's  $r$ . The correlation coefficient varies between  $-1$  and  $+1$  which means perfect negative and positive correlation respectively. Rules of thumb on magnitudes are that correlations below  $.19$  are very low;  $.20$  to  $.39$  are low;  $.40$  to  $.69$  are modest;  $.70$  to  $.89$  are high, and  $.90$  to  $1$  are very high. It is emphasised that bivariate correlations do not imply causality, nor control for alternative explanations. Thus, the reported rank correlations in table 6 are not sufficient in themselves for rejecting or claiming support for the hypotheses.

Of the Spearman rank correlation coefficients regarding the 9 hypothesised bivariate relationships, it can be seen that 4 were negative and 5 were positive. 6 of the 9 rank correlations were greater than  $r = \pm.33$ . Furthermore, seven of the rank correlations were significant on the  $.01$ -level ( $p < .01$ ) with one-tailed tests. However, 4 of the 9 correlations were in the opposite direction than hypothesised.

The rank correlation between municipal manyears and the performance measurement index was modest with  $r = .51$  ( $p < .01$ ) and in accordance with hypothesis 1 which predicted a positive relationship. The rank correlation between municipal manyears and free disposable municipal income 1994 was low with  $r = -.38$  ( $p < .01$ ) while hypothesis 2 predicted a positive relationship. Note, however, that the two indicators used in this operationalisation did not satisfy the temporal ordering for causal explanations, but were nevertheless selected due to measurement problems (availability of data). The rank correlation between free disposable municipal income in 1994 and the performance measurement index was low with  $r = -.33$  ( $p < .01$ ) and in accordance with the direction predicted in hypothesis 3. Hypothesis 4 predicted a negative relation between uncertainty (complexity) and use of performance measurement. However, the rank correlation

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between municipal inhabitants and the performance measurement index was modest with  $r = .49$  ( $p < .01$ ) and of opposite direction than the hypothesised sign. Furthermore, the rank correlation between the decentralisation index and the performance measurement index was also positive but low with  $r = .25$  ( $p < .01$ ). Note also that there was a moderate positive rank correlation of  $r = .54$  ( $p < .01$ ) between municipal manyears and decentralisation. Thus, as expected, the municipalities seem to decentralise more as complexity increases with organisational size.

Hypothesis 5 predicted a positive relationship between uncertainty and slack. However, the rank correlation between municipal inhabitants and free disposable municipal income in 1994 was modest with  $r = -.43$  ( $p < .01$ ) and of opposite direction than predicted by hypothesis 5. Note also for this relationship that the two indicators used in the operationalisation did not satisfy the temporal ordering for causal explanations, but were nevertheless selected due to measurement problems. The fourth relationship contrary to predicted was between ambiguity and use of performance measurement where hypothesis 6 predicted a negative relationship. The rank correlation between the dummy variable on different party affiliation of the mayor and deputy mayor and the performance measurement index showed the very low positive relationship of  $r = .05$ , but this relationship was not significant on the .05 level. The rank correlation between municipal centrality and the performance measurement index was also very low with  $r = .17$  ( $p < .05$ ), but with the sign in the hypothesised direction according to hypothesis 7. The rank correlation between percentage leftist representatives in the municipal councils and the performance measurement index was low and with  $r = .27$  ( $p < .01$ ). The rank correlation between percentage municipal employees of all employed inhabitants aged 16–74 in the municipality and the performance measurement index was modest with  $r = -.41$  ( $p < .01$ ) and with the direction of the sign as predicted in hypothesis 8. The last hypothesised relationship present in table 6 was between municipal dependence on local taxpayers and use of performance measurement. The rank correlation between income tax *per capita* and the performance measurement index was very low with  $r = .19$  ( $p < .01$ ) and with the sign as predicted in hypothesis 10.

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**Table 6.** Spearman's (rho) rank correlation coefficients

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Municipal manyears														
2 Free disposable municipal income	-.375**													
3 Municipal inhabitants	.981**	-.430**												
4 Decentralisation	.524**	-.166*	.525**											
5 Mayor and deputy mayor from different party	.075	.060	.122	.053										
6 Municipal centrality	.333**	-.236**	.413**	.171*	.269**									
7 Leftist municipal representatives	.353**	-.514**	.330**	.089	-.304**	-.011								
8 Municipal employees of all employed	-.741**	.459**	-.811**	-.333**	-.212**	-.526**	-.168*							
9 Income tax <i>per capita</i>	.292**	.212**	.236**	.075	.011	.107	-.085	-.218**						
10 Performance measurement index	.508**	-.332**	.492**	.246**	.052	.166*	.271**	-.410**	.189**					
11 Performance indicators subindex	.496**	-.198**	.487**	.229**	.037	.203**	.226**	-.400**	.275**	.692**				
12 Verbal conclusions subindex	.405**	-.347**	.388**	.183*	.065	.110	.269**	-.333**	.092	.935**	.478**			
13 Management by objectives (MBO)	.277**	-.011	.278**	.078	.119	.165*	.053	-.297**	.237**	.296**	.343**	.209**		
14 Value for money (VFM) auditing index	.209**	-.100	.225**	.096	.180*	.104	.085	-.252**	.038	.170*	-.020	.223**	-.001	
15 Financial auditing index	-.044	-.050	-.048	-.013	-.100	.027	.084	.102	-.034	-.036	-.040	-.040	-.028	-.115

*Note.* All variables are untransformed. Missing cases regarding the decentralisation, VFM and financial auditing indexes, were deleted casewise (N=136–162).

\*\*Correlation is significant at the .01 level (1-tailed).

\*Correlation is significant at the .05 level (1-tailed).



### ESTIMATION OF THE MODELS

Regression analysis utilises the technique of minimising least squares. It has several assumptions where linearity is one of the most important. Breaches on the linearity assumption are commonly remedied with transformations of the data (Kimberly, 1976). For instance, size-related variables are commonly skewed. Subsequently such data are often transformed using logarithmic transformations. This reduces the potential of the variables' correlation to be very strongly affected by extreme scores. Furthermore, the distribution which results from a log transformation more closely approximates the normality assumption which underlies multivariate analysis. However, this approach implicitly assumes a curvilinear relationship with all of the other variables in the equation. Nevertheless, nonlinearity may be relevant if the administrative structure of interest is very sensitive to size difference when organisations are relatively small, but less sensitive to such differences in larger organisations. If the administrative structure is a function of several exponentiated variables, the equation can be tested with linear regression taking log transformations of all the variables. However, such logarithmic functions were unknown *a priori* in my study, and may furthermore have been unduly restrictive as a starting assumption for this ill-defined problem. It is also common to use square root or quadratic transformations of size related variables. I have therefore employed the modified regression analysis as outlined in chapter 5. This approach facilitates choosing selective data transformations and inclusion of interaction terms based on *a priori* theoretical grounds (Pong and Whittington, 1994).

The dependent variable, the performance measurement index, was square root transformed. This form was chosen to discount the impact of subsequent frequencies of performance measurement above the initial levels. Visual inspection of the size related variables, municipal manyears and municipal inhabitants, still indicated nonlinearity when these variables were plotted on the square root transformed dependent variable. On theoretical reasons one may assume that both asymmetric information and complexity increase more than proportional relative to increase in number of bureaucrats and decentralised administrative units respectively. This is due to the potential exponential increase in number of cross-relationships as the number of bureaucrats and decentralised units increase. However, on a practical level, it seems highly unrealistic to assume that for instance bureaucrats should or could utilise all

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theoretical available networks. Hence, a square root transformation for these two independent variables was chosen. This seemed to improve the non-linearity problems, but not completely discard it.

It was assumed that the models could be mis-specified. The ordinary least square (OLS) estimations were therefore performed with a constant term in each of the regressors. The constant term can capture some of the specification errors both from omitted variables and from mis-specified functional forms. All variables were entered into the regression equation in one single step (the 'enter' method).

The asymmetric information indicator, municipal manyears, posed a problem of collinearity with the indicator for uncertainty (complexity), which was measured with the (organisational size) municipal inhabitant variable. A rule of thumb is that a correlation of .80 or more represents a problem of collinearity. The correlation between these two variables was close to unity. A remedy to this collinearity problem could have been to estimate the agency theory/public choice model with the asymmetric information variable (bureaucracy size) included, and the contingency theory model with the organisational complexity indicator (organisational size) included separately, and then based on corroboration of the hypotheses, judge which of these variables respectively should have been included in the fully specified, explanatory model encompassing all the three models. An alternative approach could have been to assume that complexity and uncertainty were reflected in the organisational design variable decentralisation. In that case, the municipal inhabitants indicator for complexity might have been discarded, and the most severe collinearity problem could have been omitted. However, this latter approach would basically have made the positive assumption that the municipalities already had an optimal contingency fit, while my main project was to undertake empirical investigations without making such assumptions. Furthermore, contingency fit is an issue for further investigations. Even though I had included an organisational design variable in my study, adequate performance measures (other than slack) were not included which would have been warranted in order to infer conclusions on municipal contingency fit. On this reason I chose the first approach. The models were estimated separately and then the variable which was empirically supported through the tests of the hypotheses and theoretical reasoning, was selected for the full model (model IV).

Hypothesis 5 predicted a positive relationship between uncertainty and slack.

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However, such a relationship was not corroborated by using bivariate rank correlation with municipal inhabitants (in 1996) to explain free disposable income (in 1994). Although the time ordering of the hypothesised independent variable (uncertainty) here preceded the dependent variable (slack), in the operationalisation the data for the dependent variable preceded the data for the independent variable. It is recognised that this, in conjunction with using indicators for the latent variables uncertainty and slack, are major sources for measurement problems. Furthermore, the lack of support to the hypothesised relationship between uncertainty and slack may also be due to institutional factors in the Norwegian local government grant system. This system has been criticised for granting too much resources to smaller, non-central municipalities, and too little resources to larger, central municipalities (Borge and Rattsø, 1996). Hence, the, negative rank correlation of  $-0.43$  between the complexity indicator municipal inhabitants and the slack indicator free disposable municipal income, could be attributed to the grant system and not to municipal discretion on organisational slack and design decisions. This specific bivariate relationship in my data could therefore be spurious. A *spurious relationship* is present when two variables appear to be connected but the connection is not a 'true' relationship. I have therefore not specified or included the hypothesised interaction term in hypothesis 5 between uncertainty and slack in estimation of models I and IV. The lack of variables incorporating the local government grant system thus indicates omitted variables and potential sources of mis-specification in my models.

The results from regressing models I to IV on the square root transformed performance measurement index are given in table 7. The reported regression coefficients are all standardised (beta) regression coefficients because this makes it possible to compare directly the effect of the regression coefficients as to their relative explanatory power of the dependent variable. The *beta coefficient* is the coefficient estimate from a regression in which the variables have been standardised. It can be interpreted as the number of standard error changes in the dependent variable which results from one standard error change in the independent variable. Only the adjusted coefficient of determination squared ( $R^2$ ) is given as an overall goodness-of-fit measure for the models as this measure can be used to compare models which use different numbers of independent variables. The explanatory power for all four models was relatively low as only 22 to 32% ( $F < .01$ ) of the total variation in the best case was explained by the models. However, the sign of the complexity/uncertainty indicator in

model II was opposite than predicted and moreover of relatively great magnitude. The 28% potential explanation by model II of the total variance is possibly more due to the new institutionalism symbolic or isomorphism explanation in conventional wisdom than to contingency theory. That is, with increasing uncertainty performance measurement is also used more, but for external legitimacy and decoupled from internal control, or as adaptation to uncertainty. Thus, it seems that the full model (model IV) explained the most (adjusted  $R^2 = .32$ ), followed by a marginally less explanatory power by the agency theory model, and lastly the political model. The public choice explanation in model I, however, was not supported, and is to be discussed further in chapter 7. All models have been estimated with an intercept. All models also had a positive parameter coefficient for this term. This may suggest that performance measurement is common as control model regardless of contingencies or institutional circumstances, or that the models are mis-specified. The latter alternative is, due to the skewed distributions and the likelihood of omitted variables, most plausible.

### ASYMMETRIC INFORMATION AND PERFORMANCE MEASUREMENT

A consistent result over the models which used asymmetric information as explanation, was that use of performance measurement increased when the indicator for asymmetric information, municipal manyears, increased. Many factors may vary with size related variables. Thus, model I with only a few independent variables, gave a larger parameter coefficient (.55) for asymmetric information, than model IV (.23), which had more independent variables. For instance, if management competence vary positively with organisational size, then the reported beta coefficient of .55 in model I may have captured effects from organisational competence as well as from asymmetric information. Thus, one should be very cautious in interpreting the parameter in model I and IV as a true effect of asymmetric information only. However, hypothesis 1 was not supported in either of the two models. Hence, the results could be interpreted as when there is more asymmetric information, more performance measurement is used.

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**Table 7.** Multiple regression analysis of square root of performance measurement

	<b>Model I</b> Agency theory/ public choice	<b>Model II</b> Contingency theory/ new institutionalism	<b>Model III</b> Politics	<b>Model IV</b> Full model	<b>Hypothesis</b>
1 Municipal manyears 1996 (asymmetric information). Square root transformation	.55 (2.007)*			.23 (.706)	<b>H1 (-)</b>
1*2 Municipal manyears 1996 (square root) * free disposable municipal income 1994 (square root) (interaction term of asymmetric information and slack)	-.06 (-.231)			.17 (.526)	<b>H2 (+)</b>
2 Free disposable municipal income 1994 (slack). Square root transformation	-.16 (-1.095)			-.38 (-1.608)	<b>H3 (-)</b>
3 Municipal inhabitants 1996 (complexity). Square root transformation		.52 (6.850)**			<b>H4 (-)</b>
4 Decentralisation <sup>a</sup>		.04 (0.507)		.07 (.939)	<b>H4 (-)</b>
5 Mayor and deputy mayor from different parties (political coalitions in the municipal council/ambiguity). Dummy variable		.03 (0.385)		.12 (1.525)	<b>H6 (-)</b>
6 Municipal centrality (management competence)			-.15 (-1.704)	-.18 (-2.195)*	<b>H7 (+)</b>
7 Leftist municipal representatives (leftist representatives power)			.52 (1.792)	.49 (1.500)	
8 Municipal employees 1997 of all employed inhabitants aged 16–74 (bureaucrats' power)			-.37 (-1.841)	.11 (.453)	<b>H8 (-)</b>
7*8 Leftist municipal representatives * municipal employees of all employed inhabitants aged 16–74 (interaction term of leftist representatives' power and bureaucrats' power)			-.41 (-1.357)	-.45 (-1.382)	<b>H9 (-)</b>
9 Income tax <i>per capita</i>			.20 (2.108)*	.19 (1.500)	<b>H10 (+)</b>
Intercept	6.48 (6.845)**	5.34 (11.185)**	10.11 (4.474)**	5.50 (2.258)*	
Adjusted R <sup>2</sup>	.31	.28	.22	.32	
F-value	24.614**	21.381**	9.875**	9.282**	

Note. Standardised regression (Beta) coefficients. T-values in parenthesis. N=162.

\*Significant at the .05-level.

\*\*Significant at the .01-level.

a 21 missing values for decentralisation replaced with mean.

### ASYMMETRIC INFORMATION AND SLACK

The results of models I and IV gave inconsistent results regarding the interaction term of asymmetric information and slack. In model I hypothesis 2 was not supported, while in model IV, hypothesis 2 was supported. As model IV controlled for more variables than model I, I assume that greater weight should be laid on the results of model IV. Thus, it seems reasonable to assume that hypothesis 2 only got partial support. Therefore, there could be a positive interaction relationship between asymmetric information and slack.

### SLACK AND PERFORMANCE MEASUREMENT

The relationship between the slack indicator and use of performance measurement was consistent between models I and IV and negative according to hypothesis 3. Furthermore, in model IV the slack indicator was given a larger parameter coefficient (–.38) than in model I. It thus seems plausible to state that the results give support to the notion that relatively more slack is related to less use of performance measurement.

### UNCERTAINTY AND PERFORMANCE MEASUREMENT

The relationship between uncertainty and performance measurement has been investigated by several means. First, the multiple regression results given in table 7 are presented. Then additional analyses by difference between means (table 8) and crosstabulations (table 9) are presented.

Hypothesis 4 stated a negative relationship between uncertainty and use of performance measurement. However, both the two indicators for uncertainty used in model II, and the remaining indicator for uncertainty (decentralisation) used in model IV, had positive parameter coefficients. This lack of support to hypothesis 4 is congruent both with the basic agency theory explanation which states that monitoring increases when uncertainty increases, and the alternative explanation of decoupled symbolic use of performance measurement when uncertainty increases. I therefore tried to sort out some of this unclarity by conducting more detailed analysis of uncertainty

and performance measurement below.

**Table 8.** Performance measurement and MBO by uncertainty and services

	Performance measurement				MBO			
	Mean	St.dev.	Min	Max	Mean	St.dev.	Min	Max
Chief administrative officer's comments	4.40	(4.32)	0	19	0.30	(0.83)	0	6
<i>High uncertainty services</i>								
Primary schools	11.98	(10.17)	0	52	6.51	(14.54)	0	95
Health care and social services	19.40	(17.21)	0	110	7.44	(15.13)	0	95
Culture and religion	8.34	(7.88)	0	46	5.98	(17.18)	0	143
Per service	13.24	(9.91)	0	60	6.64	(14.24)	0	100
<i>Low uncertainty services</i>								
Central administration	7.74	(7.88)	0	47	4.01	(8.89)	0	54
Housing, commercial development, environmental planning	5.04	(5.82)	0	36	3.32	(8.74)	0	59
Infrastructure	9.77	(10.86)	0	80	6.12	(14.11)	0	87
Road maintenance	1.40	(2.31)	0	12	0.96	(3.39)	0	33
Per service	6.00	(5.26)	0	38	3.60	(7.22)	0	39
All municipalities	68.10	(48.46)	0	292	34.65	(68.31)	0	437

*Note.* Mean, standard deviation (in parenthesis), minimum and maximum of frequency counts in municipal annual reports. All variables are untransformed. N=162.

Table 8 gives the use of performance measurement and MBO in the 162 Norwegian municipal annual reports in 1996 by assumed level of uncertainty and by services. The municipalities disclosed performance measurement most in the category of services with anticipated highest degree of uncertainty. In the high uncertainty category the mean use of performance measurement per service was 13 compared to 6 in the category with assumed lowest degree of uncertainty. Furthermore, the data in table 8 showed a relationship contrary to expectations according to conventional wisdom (assuming for the time being instrumental use of organisational control). A similar picture was revealed on the municipal use of MBO which also was most extensive in the services with assumed most uncertainty.

The municipalities used performance measurement most in health care and social services, and in primary schools. Health care and social services had the highest average use of performance measurement with a mean of 19 followed by primary schools with 12 and infrastructure with 10. Thus, both the two services (health care and social services, and primary schools) with highest use of performance measurement were in

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the category with assumed highest uncertainty. Also the service with lowest average use of performance measurement in the high uncertainty category, culture and religion services, had a higher average use of performance measurement than most of the services in the category with assumed low uncertainty. The maximum values also showed that there was a substantial potential for performance measurement in all services and especially in the category with assumed high uncertainty. The minimum values showed that not all the municipalities disclosed performance measurement or MBO in all services.

Thus, hypothesis 4 was neither supported when performance measurement and uncertainty was analysed with municipal level data in table 7, nor when performance measurement and uncertainty by services was analysed in table 8. Furthermore, use of the MBO model seems to validate the results from using the performance measurement index. However, as both indexes have been collected by the same content analysis method, other measures must be employed in order to provide adequate multi-method multi-trait validation of the results. The result of such an approach is reported in table 9.

**Table 9.** Municipal control models by size and decentralisation

	Small municipalities <sup>a</sup>		Medium municipalities <sup>b</sup>		Large municipalities <sup>c</sup>	
	Centralised	Decentralised <sup>d</sup>	Centralised	Decentralised <sup>d</sup>	Centralised	Decentralised <sup>d</sup>
Performance measurement	50.8 (34.71) N=49	51.3 (22.02) N=8	60.9 (37.30) N=41	56.6 (35.12) N=10	111.4 (67.44) N=7	104.0 (65.16) N=26
Management by objectives (MBO)	10.8 (21.30) N=49	27.5 (53.25) N=8	30.6 (50.68) N=41	61.7 (77.32) N=10	91.1 (76.01) N=7	43.6 (75.02) N=26
Value for money (VFM) auditing <sup>e</sup>	1.9 (1.32) N=46	1.9 (1.36) N=8	2.2 (1.35) N=39	2.2 (1.23) N=10	2.7 (1.38) N=7	2.6 (1.44) N=26
Financial auditing <sup>f</sup>	0.7 (0.71) N=46	1.1 (0.84) N=8	0.7 (0.69) N=39	0.4 (0.52) N=10	0.6 (0.54) N=7	0.7 (0.69) N=26

*Note.* Mean and standard deviation (in parenthesis). All variables are untransformed.

a Less than 5,000 inhabitants.

b 5,000–19,999 inhabitants.

c 20,000 or more inhabitants.

d Municipalities with one or more service groups with decentralised administration.

e Additive index with 5 dummy variable items ranging from 0 (low emphasis) to 5 (much emphasis).

f Additive index with 2 dummy variable items ranging from 0 (low emphasis) to 2 (much emphasis).

We may assume that complexity and hence uncertainty increases with increasing municipal size. In the Norwegian local government context it is common to assume that



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municipalities with less than 5,000 inhabitants are small and municipalities with 20,000 inhabitants or more are large. However, these categorisations may vary between countries. It is assumed that as complexity and hence uncertainty increases with increasing organisational size, the municipalities may take measures in order to reduce uncertainty to a manageable level. Common organisational design approaches used to reduce uncertainty are formalisation, specialisation and decentralisation. In table 9 the use of four distinct organisational control models are given both by municipal size and by decentralisation. It should be noted, though, that results computed from small numbers, for instance data from the cells with less than 10 cases, should be interpreted with great caution due to potentially low reliability. Table 9 shows that use of both performance measurement, MBO and VFM auditing increased with increasing municipal size, but were moderated by decentralisation among the largest municipalities. Furthermore, municipal emphasis on financial auditing were largely insensitive to variation in any particular way with regard to size and decentralisation. This result is plausible as financial auditing is regulated by law and connected with long traditions and norms on general accepted accounting practice (GAAP). VFM auditing is not standardised to the same extent as financial auditing. Neither performance measurement nor MBO are regulated or mandated at all in the Norwegian local government. Thus, the data reported in table 9 did then not support hypothesis 4. Moreover, both using data collected by different methods, and using data for dissimilar control models, provided results consistent with the previous reported results. Multi methods provided consistent results while multi traits revealed dissimilar results. These findings provide enhanced corroboration to the construct validity and reliability of the indexes developed and employed in this study.

### AMBIGUITY AND PERFORMANCE MEASUREMENT

Hypothesis 6 predicted a negative relationship between ambiguity and use of performance measurement. However, both model III and model IV gave consistent but small positive parameter coefficients of the ambiguity indicator. This means that hypothesis 6 was not supported. However, the indicator for ambiguity is questionable. If the mayor and deputy mayor do not come from the same party, this could also indicate a

relatively high degree of political interparty competition. If one assume that both the position of mayor and deputy mayor have substantial influence, then these positions may have relatively more influence when there is only one such position in the parties in question rather than in situations when there are two such positions within the one, ruling party. If this critique is substantial, then I have not tested hypothesis 6. However, if the indicator is valid for measuring political competition, then one may tentatively assume that as political competition increases, performance measurement is used more. Thus, in that case, this indicator should have been included in model III rather than in model II.

### POWER AND PERFORMANCE MEASUREMENT

Except for the indicator for municipal employees' power, all the indicators for the political variables' parameter coefficients were consistent in sign across model III and model IV. However, hypothesis 7 on a positive relationship between management competence and use of performance measurement was not supported. There are many potential explanations for this result. Measurement errors regarding the use of municipal centrality as indicator for management competence is certainly one.

The results gave a consistent and relatively high and stable parameter coefficient for a positive relationship between leftist representatives in the municipal councils and use of performance measurement.

Hypothesis 8 predicted a negative relationship between municipal employees' power and use of performance measurement. As model III and model IV gave inconsistent signs for the parameter coefficients, the results are inconclusive. However, the parameter coefficient for the interaction term between leftist municipal representatives and the municipal employee power indicator were consistent and negative. Hypothesis 9, which assumed a negative relationship between adverse selection of municipal employee and leftist municipal representatives and use of performance measurement, was supported. The last variable in the political model was municipal dependence on local taxpayers. It was found a positive relationship between income tax *per capita* and use of performance measurement in both model III and IV, thus supporting hypothesis 10.

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**Table 10.** Municipalities ranked highest and lowest on performance measurement

Rank	Municipality	County	Municipal inhabitants	Free disposable municipal income	Mayor and deputy mayor from different parties	Leftist municipal representatives	Municipal employees of all employed	Municipal grant <i>per capita</i> <sup>a</sup>	Participation in implementation networks or projects <sup>b</sup>	MBO
<i>Most use of performance measurement in the annual reports</i>										
1	Stavanger	Rogaland	105,626	1.15	Yes	0.33	0.15	2,558	Yes	Yes
2	Trondheim	Sør-Trøndelag	144,670	0.46	Yes	0.34	0.16	3,180	Yes	Yes
3	Porsgrunn	Telemark	31,959	0.57	Yes	0.47	0.17	3,677	No	No
4	Ålesund	Møre og Romsdal	37,527	0.37	Yes	0.26	0.14	3,306	No	Yes
5	Bodø	Nordland	39,916	0.59	Yes	0.49	0.14	3,380	Yes	Yes
6	Tromsø	Troms	57,384	0.43	Yes	0.48	0.14	5,376	Yes	Yes
	Central tendency		69,514 <sup>c</sup>	0.60 <sup>c</sup>	Yes <sup>d</sup>	0.39 <sup>c</sup>	0.15 <sup>c</sup>	3,580 <sup>c</sup>	Yes <sup>d</sup>	Yes <sup>d</sup>
<i>Least use of performance measurement in the annual reports</i>										
157	Audnedal	Vest-Agder	1,551	0.97	Yes	0.29	0.23	13,547	No	Yes
158	Bygland	Aust-Agder	1,346	1.99	Yes	0.40	0.32	14,250	No	Yes
159	Sirdal	Vest-Agder	1,753	5.17	Yes	0.21	0.35	3,409	No	No
160	Austevoll	Hordaland	4,274	0.74	Yes	0.22	0.20	11,314	No	No
161	Iveland	Aust-Agder	1,140	1.07	Yes	0.24	0.22	14,735	No	No
162	Åmli	Aust-Agder	1,900	1.28	No	0.57	0.27	11,473	No	Yes
	Central tendency		1,994 <sup>c</sup>	1.87 <sup>c</sup>	Yes <sup>d</sup>	0.32 <sup>c</sup>	0.27 <sup>c</sup>	11,455 <sup>c</sup>	No <sup>d</sup>	–

*Note.*

a Source: Ministry of Local Affairs and Regional Development (1998).

b Source: Johnsen (1997) and Vabo (1996).

c Mean (N=6).

d Mode (N=6).

### CASE STUDY OF MUNICIPALITIES WITH THE HIGHEST AND LOWEST USE OF PERFORMANCE MEASUREMENT

*Case study* is a research design which is used to investigate a contemporary phenomenon within its real-life context and especially when the boundaries between the phenomenon and the context are not clearly evident. Furthermore, case studies cope with the situation when there are more variables than cases (datapoints or units of analysis). The case study research design relies on multiple sources of evidence used for triangulation, and benefits from prior development of theoretical propositions to guide data collection and analysis (Yin, 1994). Here I have utilised a simple case study design in order to learn as much as possible from my data. The strategic aim of a regression analysis is basically to reveal potential commonalities in the data by identifying or inference population parameters. Another research strategy is to reveal differences by scrutinising ‘outliers’. One case study tactic in searching for cross-case patterns is to select pairs of cases and then list similarities and differences between each pair (Eisenhardt, 1989b). For instance, the most distinct cases may be studied in detail in order to understand why these cases do not fit neatly within a common typology or why these cases reduce the overall fit for instance of a regression model. While this tactic commonly is used in building theories, here I have used this tactic in order to validate the results from the multiple regression. Thus, if this case study eventually reveals similar conclusions as the multiple regression, greater trust can be put in the results reported above. If dissimilar results are revealed, then the trust in the above reported findings would decline. Furthermore, a case study might provide insights which otherwise could have been lost by using one or a few methods alone.

Table 10 presents the six highest and the six lowest ranked users of performance measurement together with 10 independent variables. The data on municipalities which have participated in performance measurement implementation networks or participated in municipal administrative reform projects, are obtained from Johnsen (1997) and Vabo (1996). Both these studies only documented municipal projects encompassing performance measurement or administrative reforms which had been evaluated or reported in the literature. 22 of the 162 municipalities (14%) of the defined population in this thesis had participated in one or more implementation networks or projects within 1996. However, this figure could have been too low as some municipalities may

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have developed and used performance measurement without participating in reported or evaluated projects. The data for municipal grants *per capita* was obtained from official statistics published by the Ministry for Local Affairs and Regional Development in 1998. The other variables are identical with the previously reported data.

The overall results from this brief case study were that the six municipalities with lowest use of performance measurement, all were located in the Southern or Western regions. These six municipalities were all small but they had relatively much free disposable municipal income. They had also somewhat less leftist representatives in the municipal councils, but the mean percentage municipal employees of all employed inhabitants was almost twice as large as in the group of municipalities with highest use of performance measurement. All but one of the municipalities in the low-use group had a relatively high dependence on resources provided as grants. The remaining municipality, Sirdal, obtained relatively much resources from income taxes. None of the municipalities with lowest use of performance measurement had reportedly participated in implementation networks or projects regarding formal control structures, and half of these municipalities did not use MBO. The group of municipalities with highest use of performance measurement were all large municipalities and they had relatively little free disposable municipal income. Most of these municipalities had participated in implementation networks or projects regarding performance measurement or MBO, and all but one also used MBO.

This simple case study seems to support several of the results reported above. Size related variables, little free disposable municipal income, leftist municipal representatives, and few municipal employees relative to all employed inhabitants, seemed to be related to much use of performance measurement. Furthermore, high dependence on resources other than grants, participation in implementation structures, and overlap of control models, seemed to be related to much use of performance measurement. Thus, also the results from the case study indicated that asymmetric information, slack, bureaucracy power, and resource dependence, could be relevant independent variables. In addition, the case study also identified other variables as implementation issues and overlap of control models, as potential explanations in studies of municipal performance measurement.

### CONCLUSIONS

The above reported results indicate that performance measurement is used more as asymmetric information increases. Thus, hypothesis 1 was not supported. Furthermore, the results could indicate that when there is much asymmetric information then there is also much slack. However, the results on hypothesis 2 were inconclusive. There seems to be a relation between more slack and less use of performance measurement. Here hypothesis 3 was supported by both models which were estimated for this relationship. There seemed to be a positive relationship between uncertainty and use of performance measurement as predicted in hypothesis 4. This relationship was analysed with three indicators, tested both on the organisational level and at the service level, and controlled for organisational design to remedy organisational complexity and uncertainty, as decentralisation. However, the results were consistent and indicated that more uncertainty was related to more use of performance measurement. The empirical results were inconclusive whether this extended use of performance measurement under uncertainty was instrumental or symbolic use of information. The empirical results did possibly not provide any credible test of hypothesis 6 on ambiguity and use of performance measurement. On the other hand, the results could indicate that performance measurement increased with increasing political interparty competition. Hypothesis 7 predicted a positive relationship between management competence and use of performance measurement. When municipal centrality was used as indicator for management competence, the hypothesis was not supported. Regarding political preferences and use of performance measurement, the literature is inconclusive and therefore no hypothesis was formulated on this issue. However, the empirical results indicated consistently in two models that relatively more leftist representatives in the municipal councils were related to more use of performance measurement. While hypothesis 8 was formulated with a negative relationship between the power of municipal employees and the use of performance measurement, the results were inconclusive in the two models which were estimated for this relationship. However, the interaction term between leftist representatives' political power and municipal employees' power which was hypothesised to be negatively related to use of performance measurement, was supported in both models used (hypothesis 9). Lastly, hypothesis 10 on resource dependence was supported as there was found a positive

relationship between income tax *per capita* and municipal use of performance measurement in both models estimated for this relationship.

The above reported results must be moderated with regard to the presence of likely mis-specifications in the models, and measurement errors due to the extensive use of indicators. One possible source of mis-specification is estimating the models with wrong functional forms. This problem was dealt with by certain data transformations, but it was not entirely solved. Thus, some of the low explanatory power of the models could possibly be due to the presence of mis-specified functional forms in the models.

Another possible source of mis-specification is omitted variables. The interaction term between uncertainty and slack was omitted from the models. One possible source of this specific problem was the Norwegian general grant system, which was not included in the models. The grant system is structurally designed to redistribute resources from central to non-central municipalities. However, although this is disputed, one may assume that this mechanism could have resulted in overcompensation for non-central drawbacks in production costs. Thus, my data indicated that there were relatively more slack in smaller municipalities, and relatively less slack in larger municipalities with assumed more uncertain contingencies. However, these results may be due to omitted variables and from the Norwegian local government grant system specifically. As the local government grant system had redistribution mechanisms so as to achieve smoothing the municipal incomes toward the national mean, also the indicators for municipal resource dependence must be interpreted with great caution. This means that if a municipality had a seemingly high dependence on the local taxpayers, it must be considered that a hypothetical potential loss of all municipal income taxes would not have resulted in a subsequent identical loss in municipal operating income. The redistribution mechanism of the local government grant system would have intervened and compensated for some of this loss in resources. Furthermore, the case study indicated that both implementation issues and the presence of overlap of control models, possibly indicating or affecting management competence, were potential explanatory factors. These aspects may also indicate the possibility of certain omitted variables in the models I have used to explain municipal use of performance measurement.

The most severe measurement errors could possibly be related to the use of size-related indicators for asymmetric information and uncertainty. Many factors are assumed to vary with size in organisational studies. The reported modelled effects of the

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variables which were measured with such indicators, must therefore be interpreted with great caution. Another variable which probably was concerned with measurement errors, was the dummy variable which initially was operationalised as an indicator for ambiguity. This indicator should possibly rather have been interpreted and modelled as indicating political interparty competition and have been included in the political model rather than in the conventional wisdom model of contingency theory and new institutionalism. If this was the case, then the results indicated that performance measurement increased with increasing political interparty competition.



## 7 Discussion

In this last chapter, I want to move beyond my specific data and integrate my findings into existing research and theory. This discussion proceeds with the following outline. Next an overview of the findings is provided and some limitations with the study are identified. The third section discusses potential implications of the findings for current organisation theory. The fourth section addresses implications for future research, policy and practice. The last section presents two thoughts in the closing of this project.

### OVERVIEW OF FINDINGS

The initial purpose for this thesis was to enhance our understanding on how organisational control is used in political institutions. However, after a while I discovered that this may just as well be pursued as a second look at one of the widespread conventional wisdom in organisational control. Both my own experiences, classics in the field, as well as several empirical studies, indicated rather strongly that the conventional wisdom was not firmly established by empirical support, in spite of its widespread use in textbooks. My initial research question for this project was how asymmetric information and uncertainty affect performance measurement in political institutions, and local government was chosen as context for this investigation.

In chapter 2 I asserted that the political dimension of organisational control may be prevalent also in organisational control in general, and not distinct only to political institutions. However, to apply economics of organisation in positive studies of political institutions, it was called for an extended appreciation for politics. Politics was related to some of the basic purposes of political institutions which are solving of collective

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problems under coercion, and redistribution. To better understand how economics of organisation is used in such contexts, the difference between Pareto optimality and Kaldor-Hicks optimality was reviewed. It was argued that as Kaldor-Hicks optimality encompasses Pareto optimality, addresses politics, and makes clear that the issues of allocative efficiency and equity are inseparable dimensions of effectiveness, the Kaldor-Hicks criterion was deemed to be a firm foundation for the positive political theory research programme, and a fruitful perspective for analysing organisational control in political institutions. The Kaldor-Hicks criterion explicitly makes us aware of the fact that economics of organisation in political institutions is as much about redistribution of the initial resources, and about conflicts and losers, as about taking initial resources as given, compromises and winners, as the Pareto criterion addresses. The Kaldor-Hicks criterion furthermore provides a sound theoretical framework of welfare economics to be utilised when the economics of organisation is to be applied in political institutions. This theoretical framework has been drawn upon in the proceeding chapters in this thesis. Though the claim for using welfare theory and Kaldor-Hicks optimality as criterion in positive studies of political institutions are not new, it nevertheless seems to have been neglected in several disciplines in the later years, as in accounting and in political science. The first find in this study of organisational control in political institutions was therefore a rediscovery and reappraisal of classical microeconomics, not as more borrowing from the economics research tradition, but as borrowing from the microeconomics research programme. It was furthermore suggested that this theoretical framework may also have relevance to organisational control in general and not only for positive studies of political institutions.

In chapter 3 I reviewed literature on performance measurement in political institutions. Performance measurement is an issue in many theories, but especially agency theory, classical contingency theory, organisational learning and the resource dependence perspective were found to be illuminating in explaining organisational control under asymmetric and uncertain contingencies. The second find was the longstanding tradition of public management performance research and the relatively rich empirical literature on public sector performance measurement. Again, politics turned out to be a fruitful perspective on organisational control. However, more conceptual clarity and parsimony was called for, and this was pursued in the proceeding chapter.

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In chapter 4 I elaborated on a conceptual model relating asymmetric information and uncertainty to other explanatory concepts in studies of performance measurement in political institutions. The third find, which emerged both from the review of the literature and from investigating the conceptual model, was the overwhelmingly complexity permeating the issue of organisational control in political institutions. Based on the conceptual model I derived several testable hypotheses from public choice, agency theory, contingency theory, new institutionalism and the resource dependence perspective.

Chapter 5 documented the method which was utilised to test the hypotheses with the Norwegian local government as setting. The elaboration on the research design revealed some of the inherent methodological problems related to empirical studies of organisational control and confirmed the find of complexity from the previous chapters. Potential limitations regarding external validity and generalisability from my study were assumed to be connected to the relatively small size of the municipalities in my study, local versus central government as setting, mayor-led versus city management-led municipalities, and between countries which have mandatory use of performance measurement versus other countries.

Chapter 6 documented the multivariate analysis using multiple regression on municipal performance measurement. The fourth find in this thesis was that of the three models, only the agency theory model and the political model was judged to have received empirical support. The fifth and surprising find was that the basic proposition commonly employed in contingency theory of relatively less instrumental use of output control uncertainty, was rejected as there was ample use of performance measurement and other related control models under contingencies of uncertainty. Also the agency theory model received more support than the public choice model. Thus, politics as well as the alleged symbolism stood out as relevant alternative explanation to the lack of support to the conventional wisdom. When a full model was specified using all the three models of agency theory, contingency theory/new institutionalism and politics, this only succeeded marginally better than the agency theory model alone in explaining performance measurement. However, in addition to providing additional empirical support to the theoretical relevance of asymmetric information and slack, also some empirical support was given to the relevance of politics and resource dependence. The empirical results thus may have corroborated the proposition both in agency theory and

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in positive political theory that asymmetric information and political uncertainty leads the representatives as principals to establish governing structures which may make their agents monitor themselves in competition for scarce resources.

Although the results indicated that the models were mis-specified as the overall explanation of the phenomenon was limited, only 22 to 32% of the total variation was in the best case explained by the models, many of the theoretically assumed conceptual relations were estimated. Several of the hypotheses, which were formulated congruent with conventional wisdom, were found lacking empirical support. However, their rival explanations turned out to be fully compatible with the research programme outlined in chapter 3. The results were also made subject to control for intervening variables as organisational design, and the content analysis performance measurement index was validated in a multi-method, multi-trait approach. Both these tests indicated that the results on the use of performance measurement were consistent with similar control models as management by objectives (MBO) and value for money (VFM) auditing, and less congruent with dissimilar control models as financial auditing. Thus, the performance measurement index was found valid and satisfactory regarding reliability. However, due to the general use of indicators in this study and the complex phenomena investigated, it is a fact that there are measurement errors and in particular for the independent variables, which in general reduces reliability. A case study of the 12 municipalities with either the most or the least use of performance measurement, seemed nevertheless to support the main results of the multiple regression analysis.

In the positioning of the research theme and research question addressed initially in chapter 1, organisational control was seen in conjunction with a presumable consolidation phase of the public sector in many countries (cf. table 1). Such potential grand reforms or 'natural experiments' are influenced by a number of factors where organisational control in the political institutions involved is but one vector of variables. It is however striking that the public sector may have provided the leading edge on performance measurement issues at the same time as the consolidation of the public sector may have taken place, and the effects of this reform on reducing the relative size of the public sector in many countries now may be emerging. Meyer (1979) found that public bureaucracies were considerably more open to their environments than stereotypes as classical bureaucracy theory suggested. There is not enough evidence to state that performance measurement in political institutions has played a significant role

in public sector reforms, nor has that research question been addressed explicitly in this thesis. The correlation nevertheless seems to provide potential for many new propositions on the role of organisational control in public sector reforms in further empirical investigations.

### IMPLICATIONS FOR CURRENT ORGANISATION THEORY

In the 1970s Anthony Hopwood, Professor of Accounting and editor of one of the top four scientific journals in accounting, argued for using a critical, organisational perspective in accounting research (Hopwood, 1978). Hopwood gave several reasons for using a critical, organisational perspective. First, the critical perspective takes social interests explicitly into consideration. Second, the critical perspective in interdisciplinary research is a means to avoid assuming that certain theoretical insights or claims are firmly established, while they in fact may not be so. To neglect this in interdisciplinary research may result in 'citation lag' or focusing on findings and perspectives that subsequently are questioned or even discredited. Third, Hopwood argued that the organisational perspective provides a way of building on previous research developments. This paper has, interestingly in itself, only got 16 citations in the Social Science Citation Index including several from critical and postmodern scholars, relative to his 'near classics' (Brown, 1996) call for studying accounting in the context in which it operates (Hopwood, 1983), which many scholars have utilised in arguing for employing case studies, which has been cited 33 times. If this indicates that there has been more inductive case studies with relatively little regard for previous studies, than deductive or cumulative oriented studies (March, 1999), or that a multi-theory perspective, as organisation theory, not has been employed, then it could explain why the rich literature on public sector performance measurement largely has been seemingly unnoticed.

I have used an organisational theory perspective throughout this project. However, whether my findings may have implications for current theory and cumulative formation of knowledge or not, depends on several factors. First, present organisation theory is constituted by many theories, cf. for instance Hatch (1997) and Pfeffer (1997). Therefore, I have restricted my discussion only to the perspectives I already have dealt

with so far in this thesis. Second, within a specific theory there would likely be a lack of consensus even among distinguished scholars, hence different scholars could reach different conclusions. Polsby (1998), in his rereading of Thomas S. Kuhn's *The Structure of Scientific Revolutions*, argued that the resistance to change which Kuhn described as integral to paradigm shifts, is nowadays found less in the natural sciences but probably more in the political and social sciences. A *paradigm* is a set of acknowledged examples of laws, theories, experiments and instruments which serve as models for coherent scientific traditions (Kuhn, 1970). Polsby concluded that the more formal language and the more precise the empirical expectations the scientific communities use, the more readily they can identify normal science anomalies and stimulate the replacement of scientific paradigms. *Normal science* is here understood as problem-solving activity in the context of an orthodox theoretical framework (Blaug, 1980). It should therefore be of no surprise if 'anomalies' may exist over extended periods of time in the organisation sciences as organisation theory has relatively low consensus of precise empirical expectations.

Organisation and management theory is still fragmented and without the consensus characterising relatively more paradigmatic developed disciplines as economics and political science (Pfeffer, 1993; Donaldson, 1995; Engwall, 1995). *Paradigm development* refers to the technological uncertainty associated with the production of knowledge in a given scientific field or subspeciality. *Technological uncertainty* means here that there is disagreement on the notion that certain methods, certain sequences and programmes of study, and certain research questions will advance training and knowledge in a given field (Pfeffer, 1993). With these considerations in mind, I have below elaborated on my opinions on the implications of my findings for current theory.

Both the resource dependence/organisational learning and public choice literature have put forward explanations as to why formal and instrumental organisational control models such as performance measurement, could be extensively used despite ambiguous and uncertain contexts. A potential explanation is that public sector management uses performance measurement to increase transparency, learn about means-ends relationships, outcomes and preferences, reduce uncertainty, and influence both power structures, legitimacy and resources (Abernethy and Stoelwinder, 1995). Furthermore, the demand for information is not stemming from management only. Political competition may induce rivalling political candidates to demand information to

scrutinise or challenge the ruling coalitions. Such demands may increase with increasing ambiguity and uncertainty. Interest groups and media may demand information from public sector organisations, demands which could be facilitated with performance measurement. Also internal actors may demand information to be used for internal politics as well as external legitimacy. Performance measurement exemplifies that it is difficult to distinguish between the operational, managerial and strategic level in management control (Langfield-Smith, 1997), as well as between management and politics. In summary, performance measurement could be widely used by many actors and for a variety of purposes. In the following sections I have elaborated in some more detail certain potential implications of my findings for positive theory of political institutions, for contingency theory, for public management theory, and for new institutionalism.

### **The relevance of agency theory for political institutions**

Ramberg (1997) in his doctoral dissertation *Design and Use of Municipal Performance Measures*, took a similar position as I have taken to the instrumental use of performance measurement in municipal organisations as contrasted to the alleged symbolic use. Ramberg used document studies and interviews in four Swedish municipalities in the early 1990s in his study. He found that performance measurement had been used in planning and feedback in formal control systems, but maybe to a lesser extent than was expected relative to the extensive interest in performance measurement issues in the early 1990s. However, this discrepancy may also be due to different operationalisations of performance measurement. I have included certain verbal conclusions in my performance measurement index as contrasted to only counting numerical measures. On the other hand, Ramberg also came to several of the same conclusions as I have come to in my project. Specifically, Ramberg found that the more organisational levels an organisation had, the more common was the design of performance measurement. I found that the use of performance measurement increased with increasing asymmetry, uncertainty and complexity. Ramberg found that for operations and units financed through charges, the chances of designing performance measures increased. I found that use of performance measurement increased with increasing dependence on local taxpayers. Ramberg found that standardised or process technologies facilitated design of

result measures. I found that there were substantial overlaps between several control models under contingencies of uncertainty.

Ramberg argued that the central hierarchical levels both most likely were users and that they also found it more suitable to use performance measures than actors at the local level. Poister and Streib (1999), using a survey to senior municipal officials, reported that 80% indicated that the city manager or chief administrative officer was the primary audience for the performance measures. These findings are consistent with my arguments that performance measurement does not necessarily imply extensive employee participation but may be used in organisational control and politics more selectively by certain organisational actors (Johnsen, 1999).

Ramberg (1997) did not deny that performance measurement could be used symbolically and as a reflection of inconsistent external demands. However, both he and I (and others) found that performance measurement could function as signalling. Ramberg explained use of performance measurement as signalling in the formal role of municipal section heads in ensuring that individuals working under different control systems and with different terminology could adequately inform and understand each other. This function was termed as 'translation' whereas I have used the more traditional concept of implementation for seemingly related functions. Thus, it could be likely that performance measurement is a means for establishing reputation and trust in TIT-FOR-TAT like strategies (Axelrod, 1984) in organisations with relatively high degree of asymmetry and uncertainty. Trust requires control, and control requires trust. These two concepts are not mutually exclusive but rather complement each other (Power, 1997). Moreover, lobbying can be costly in larger municipalities (Sørensen, 1998). Therefore the politicians may employ monitoring to a relatively larger extent in larger organisations and in more uncertain contingencies because lobbying can be a less efficient way of receiving feedback from the constituencies in such circumstances. Thus, several of the findings I have reported in my study are corroborated by studies with different methods and with data from other settings.

Whereas uncertainty may be reduced and profitability increased by standardisation in firms, standardisation only may not be an efficient strategy for local government. Effectiveness is pursued by efficiency and adaptiveness to local preferences. Standardisation may result in citizens' dissatisfaction and inhabitants voting with their feet by migration to other municipalities (Tiebout, 1956). On the other hand,



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performance measurement may be highly useful in order to monitor the effects of standardisation, flexibility and local adaptiveness, for instance by benchmarking comparable local authorities. This use of formal structures may be especially relevant in public sector organisations as they have to adapt under uncertainty, but without market competition to provide for selection of efficient organisational forms (Alchian, 1950).

The condition of transparency furthermore may imply that less visible but common control mechanisms as decibel meters, sanctioning, appointment and recruitment, have to be complemented by formal and transparent control structures in order to both induce change internally, as well as to provide credible legitimacy externally. However, if formal control models as performance measurement are not adapted through coercion for instance through governmental regulation, or through strong norms for instance through conventional wisdom, one may expect that they are not homogeneously adapted. This was found in the Norwegian local government (cf. the low adjusted  $R^2$  in table 7 and the high standard deviations in table 8 and 9), as well as in the US local government regarding non-mandatory use of performance measurement. In US municipalities with 25,000 or more inhabitants only 38% used performance measurement in 1997 (Poister and Streib, 1999).

Even though there may be extensive asymmetry and uncertainty, organisational control decisions are not under full control of the assumed self-interested bureaucrats. Put simply: public choice may provide relevant explanations as to why bureaucrats may resist organisational control, but agency theory seems to be more valid in explaining how organisational control is actually used. Thus, one explanation to the low explanatory power of the empirical models reported in chapter 6 and in similar studies (Giroux, 1989), may resemble the identification problem of simultaneous supply and demands functions in econometrics. The data used throughout this study may have represented both the bureaucracy supply function of performance measurement, as well as the common agency demand functions for monitoring. In the worst case, the end empirical results may have become an almost meaningless hybrid. Nevertheless, agency theory may provide substantial explanatory power to public management because agency theory addresses the issue that monitoring is an organisational decision.

### **The relevance of organisational learning for contingency theory**

Chapman (1997) recently reviewed contingency theory and argued that the literature has not yet developed a credible and comprehensive contingency theory of accounting. A limitation in the present state was that essential contingency arguments were not always recognised as such and incorporated in the contingency theory framework. His recommendation was to distinguish between complexity and uncertainty, arguing that it was uncertainty that would drive an organisation's information processing requirements, and not complexity. Complexity may be adequately handled by organisational design on decentralisation, formalisation and specialisation. In this thesis I have studied uncertainty and its influence on information.

I have found that use of performance measurement increased with organisational size and this was assumed to be related to uncertainty. This find was corroborated by Poister and Streib (1999) who reported that performance measurement were more prevalent in relatively larger US municipalities. Although their study encompassed municipalities with 25,000 or more inhabitants, the US municipal context was comparable to Norway in the respect that there was no formal mandate for US city and county governments to use performance measurement systems, as there was for the US federal (national) government under the Government Performance and Results Act of 1993.

The results reported in my study are on the other hand somewhat dissimilar to the findings from Australian central government departments. Alford and Baird (1997) found that the contingency approach where problems in measuring ends (ambiguity) and difficulties in relating means to ends (uncertainty), was supported in explaining how the Australian central government departments carried out performance measurement. One major difference between the measurement of Alford and Baird (1997) and the performance measurement index presented in this study, is that the latter study has extended the work of Alford and Baird (1997) and others by also measuring verbal expressions of performance measurement in addition to counting frequencies of PIs in the documents only. The reason for this was that the running down and proliferation of PIs, together with economising in presenting vast amounts of information in a few pages in annual reports, may necessitate presenting verbal conclusions in stead of some numerical data. This operationalisation of performance measurement may have enhanced the construct validity of the index employed in the present study with regard

to measuring performance measurement rather than measuring use of PIs only. This may explain why the results in my study have not supported the conventional wisdom framework. Furthermore, Alford and Baird (1997) investigated central government while in this study I have studied local government. Both ambiguity and uncertainty may vary between these governmental levels and also between countries. One may consider that the public sector context in Australia with a population of 18.5 million inhabitants is more complex than public sector management in Norway which only has 4.4 million inhabitants and furthermore is a relatively rich country.

Richness and budget constraints have been proposed as central explanatory variables in the contingency literature (Wildavsky, 1986), cf. also Hood's (1995) motif-and-opportunity hypothesis. OECD data showed that general government total outlays as percent of nominal GDP in 1997 were 35% in Australia and 44% in Norway. This may have caused a more urgent motive for Norwegian public sector to adopt performance measurement as a means for optimising effectiveness while for instance reducing the size of the public sector. Equally, marginal considerations may have urged the Australian government which had a relatively smaller public sector, to adopt performance measurement to optimise efficiency because of a need to utilise relatively more scarce resources.

This discussion of the results based on contingency theory gives indeterminate conclusions. At the service and organisational levels, performance measurement seems to be used more as uncertainty increases. At the governmental or national levels, it is not possible to state any conclusions.

Hitherto I have not discussed how the information could be used. Hedberg and Jönsson (1978) proposed the idea that information systems should be employed as adopted strategies were hypotheses of how the organisation and the environment work. According to this notion information systems are basically tools for reducing uncertainty. Furthermore, information systems then likely would change when both internal and/or external relationships change due to rational design of the information system. Thus, it is also likely that internal and external power relationships may affect design and use of information systems. Regarding contingency theory, the notion of reducing uncertainty in a dynamic perspective is what concerns me here. The issue of politics is addressed below.

Performance measurement could be important for organisational learning under

uncertainty because it can reduce uncertainty in the longer run. These mechanisms have been appreciated and extensively elaborated on in classical economics of organisation (Cyert and March, 1963/1992) and classical contingency theory (Thompson, 1967) through standard operating procedures (SOPs). Performance measurement can address inconsistencies and reveal conflicts adhering to the Kaldor-Hicks criterion. However, performance measurement could also facilitate the exploration of learning curves both in production and in distribution of goods. Such exploration may circumvent win-loose confrontations but rather turn at least some political issues into win-win, Pareto improvement choices.

Appreciation of the dynamic aspect of information in reducing uncertainty seems to have faded away from the agenda in more recent contingency theory, as in conventional wisdom. The notion of designed, semi-confusing information systems in uncertain contingencies adds exactly this dynamic element to the development of organisational control structures as adaptation to the environment. In addition, also the relevance of politics is added to organisational control. The use of performance measurement as an organisational learning instrument thus corroborates Thompson's (1967) concept of opportunistic surveillance (search) in organisational decision making and organisational learning, in addition to quasi-resolution of conflict, uncertainty avoidance, and problemistic search, as proposed in classical economics of organisation, cf. figure 7.1 in Cyert and March (1963/1992), and in more recent institutional theory (March and Olsen, 1989). Therefore, the notion of organisational learning by reducing uncertainty seems to be a central element in further development of contingency theory.

### **The relevance of politics for public management theory**

The use of performance measurement in the Norwegian municipalities seems at first sight to correlate with organisational size and the relative budget size of the services (cf. table 8). This pattern eventually disconfirms the contingency conventional wisdom prediction. On the other hand, such a pattern could be highly compatible with the symbolism proposition. As complexity and uncertainty increases, organisations could employ performance measurement as a device for external legitimacy for organisational control. Nevertheless, there are also alternative explanations to this decoupling proposition. In most municipalities education and especially the health care and social

services constitute the largest part of the budgets. As performance measurement may be idiosyncratic for most services, this may result in substantial fixed implementation costs. The municipalities could therefore have invested most resources in control and measurement systems in the services with highest use of organisational resources. Hence, extensive performance measurement could be expected in the largest services. However, public sector is not only subject to norms of efficiency but also of reliability, equity and transparency (Hood, 1991). Therefore, *a priori* there is no reason to expect that only the largest services are monitored. Although the data support an explanation as put forward in agency theory that cost-benefit considerations govern how services are subject to performance measurement, this is not mutually inconclusive with an explanation that performance measurement also could be used in services with relatively much ambiguity and uncertainty, and hence professionalisation. Professionalisation and bureaucracies tend to be related to conflicts.

The phenomenon where the agents monitor themselves almost seems as a reversed principal-agent monitoring relationship in organisational control in political institutions (Moe, 1990) as compared to how it allegedly works in firms. Thus, in political institutions, the representatives may have protective structures not only by common agency, but also through organisational control by multiple agents monitoring themselves. Performance measurement may cope with uncertainty in order to enhance organisational learning in the longer run. Simultaneously, the multiple agents impede performance measurement on themselves due to politics and legitimacy. It should here be recalled that this notion of decentralised decisionmaking and political competition by no means are new thoughts. Hayek (1945) criticised the central planned economy for being unable to execute optimal decisions due to information problems. Hence, decentralised decisions and competition may in the longer run be far more efficient than centralised planning albeit one with central planning in theory disposes most of the information required to make optimal allocation of resources. In this respect, the observed PIs could be used analogously to the prices in a market economy.

Schumpeter (1950), another critic of the central planned economy, anticipated that capitalism would eventually perish of its own success and give way to some form of public control or socialism, what many today might call the welfare state. In order for this postcapitalist system to work as a democracy, freedom of the press and competition for political leadership were regarded as prerequisites. Thus, politics and political

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competition may be conducive for making the agents in the public sector utilise information in order to facilitate marginal adjustments. Paraphrasing Schumpeter's conception of politics: Politics is not necessarily an independent factor that must be abstracted from investigations of the fundamentals in economics. And, when it intrudes, it plays according to one's preferences either the role of a naughty boy who viciously tampers with the machine when the engineer's back is turned, or else the role of a *deus ex machina* by virtue of the mysterious wisdom of statesmen. On the contrary, politics in itself is being determined by the structure and state of the economic process (as in political institutions), and becomes a conductor of effects as completely within the range of economic theory as any purchase or sale. These notions of political institutions and political competition seem to have resonance in common economic and political streams of reform proposals, most notably in the rightist leaning supply side economics of the 1970s and 1980s as a means for reforming the at that time overly supply side regulated welfare state, and even more recently, with left's debates on the definition and implementation of 'the third way' in modern welfare states (Giddens, 1998).

In sum, as a market economy relies on regulations in order for its 'permanent revolution' to function efficiently, also the public sector may rely on certain means of competition and decentralisation, certain means of 'creative destruction', however marginal, in addition to democracy and transparency. Certain structures of political competition may be warranted for reforming the public sector in order for the public sector to fulfill its tasks in modern welfare states. Organisational control then facilitates both efficiency and legitimacy.

The resource dependence perspective is one of the few perspectives in organisation and management theory which deal with politics. The perspective has been most renowned for its contribution to strategy, and especially in conjunction with network analysis, and with mergers and acquisitions. Few scholars seem to have appreciated this perspective's foundation in classical contingency theory, its contribution on organisational use of information and to organisational learning. Paradoxically, the elements of the resource dependence perspective which have been most valued for their contribution to management theory and strategy, interdependence and politics, have seemingly gone relatively unnoticed in public management where one in the first place could have assumed that politics were even more relevant (and even is where politics had its origin).

A drawback with using the resource dependence perspective in empirical analysis, is that its concepts are not mutually exclusive relative to many other theories. For instance, I have several places throughout this thesis made the case that the resource dependence perspective builds on economics of organisation, classical contingency theory, and organisational learning. However, this critique is also valid for other theories and perspectives like the new institutionalism. Nevertheless, the resource dependence perspective deals with politics far more explicitly than most other management theories. It is therefore intriguing to incorporate the resource dependence perspective more into public management than has hitherto been common. I think the resource dependence perspective and the Kaldor-Hicks criterion in combination could enhance the realism and validity of public management research and practice, and not only in public management theory.

### **Instrumentalism, symbolism and isomorphism**

The findings challenge the symbolic interpretation of the decoupling proposition. A counter argument to the symbolic use of information is that performance measurement systems are so complex, politically risky and so expensive and time consuming to implement, that symbolic use could only serve as a partial explanation. A more efficient means to symbolise rationality could have been to adopt MBO but without PIs, which also many organisations may have done. MBO is probably easier and less costly to copy or imitate than performance measurement. Still MBO in public sector organisations has documented positive, instrumental effects, something performance measurement currently has not. However, the results showed that performance measurement was more extensively reported than MBO in the 162 Norwegian municipalities' annual reports (cf. table 8 and 9), although PIs only consisted of a small part of the performance measurement reporting. Thus, neither the conventional wisdom in contingency theory, nor the symbolic perspective in the new institutionalism, have as yet provided an extensive and convincing explanation to the findings of widespread use of performance measurement in addition to MBO in ambiguous and uncertain contingencies. Formal organisational structures in NPM may then not (only) be used as ceremonies and rituals for organisational legitimisation and myths decoupled from the 'real life' in the organisations, but for instrumental and political purposes also. This finding supports

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Meyer and Gupta's (1994) proposition that non-profit organisations tend to mix control models. I found, but without trying to be comprehensive in accounting for the diversity of control models, that the municipal use of performance measurement, MBO and VFM auditing increased with increasing uncertainty, but that financial auditing remained constant. Thus, due to uncertainty it could be rational (and not only in an institutional sense), for organisations to adapt performance measurement as a complement to other control structures. This idea highlights the relevance of institutional isomorphism.

The Norwegian setting has been found to be perhaps an extreme version of centralised control of the local government (Sørensen, 1997). However, the Norwegian government has not made performance measurement mandatory in the local government before 2001. Still, the local governments as agents used performance measurement voluntarily and extensively relative to MBO and VFM auditing. Furthermore, prior to 1996 there were in all practical respects no normative influence on the use of performance measurement through the curriculums in Norwegian management schools and universities. Therefore, isomorphism (Powell and DiMaggio, 1983) will here only be discussed in relation to professionalisation. The use of performance measurement could correlate with the initial level of clan control, as well as with size. The results showed extensive use of performance measurement in health care and social services, education, and in infrastructure services (cf. table 8). Conflicts between management and the professional norms of doctors, nurses, teachers and engineers could be highly influencing the choice of control in these services in the first place. Thus, an alternative explanation to isomorphism and adoption of business models to symbolise rationality would be that performance measurement is used under ambiguity and uncertainty to scrutinise clan control and to enhance output, behaviour or political control. However, this explanation is probably more a part of the isomorphism explanation rather than an alternative explanation to it. Uncertainty may both increase when professionals are employed, as viewed from a management perspective, as well as have been the cause of employing professionals in the first place.

Gupta, Dirsmith and Fogarty (1994) combined contingency and institutional theory in explaining organisational control in the highly institutionalised context of operational (VFM) audits of US governmental agencies by the General Accounting Office (GAO). Specifically, they found that audits conducted in institutionalised settings were associated with relatively greater use of a bureaucratic mode of control



(standardisation), and this control mode was not associated with variation in the efficiency of the audit. Furthermore, audits performed in institutionalised contexts were perceived to exhibit higher uncertainty (e.g. task variability, task difficulty and supervisor interdependence). In highly institutionalised environments there was found a path between both personal and group mode of control and efficiency. Lastly, size (larger audits) was associated with higher perceived task variability and difficulty. This study gives some support to the Ouchi (1979) and Hofstede (1981) conventional wisdom framework (which states that output control is not used under contingencies of ambiguity and uncertainty but substituted with clan control), but also to a notion that control structures could be complements and not only substitutes. Thus, to me it seems as though the isomorphic proposition is highly congruent both with agency theory, classical contingency theory, as well as the resource dependence perspective. Control models may overlap in organisations, and especially under uncertainty. This seems to have been corroborated also by Ramberg's (1997) study of the Swedish municipalities and by the results from the Norwegian local government reported in this thesis. In short, the alleged symbolic use of organisational control structures seems to be in need for a revision where symbolism only is one part of a broader and more complex picture of organisational control under uncertainty.

### IMPLICATIONS FOR FUTURE RESEARCH, POLICY AND PRACTICE

In this thesis I have sought to pursue simple, critical questions combined with simple and basic empirical research in order to enhance our understanding and appreciation of positive theory on political institutions. The conventional wisdom contingency theory seems to be in need for a closer scrutiny, and replication studies in other settings are therefore wanted. The conventional wisdom seems to lack empirical support and may be substituted with agency theory, classical contingency theory, the resource dependence perspective, isomorphism, or all of these. However, there seems to be a need for more empirical studies, and also more thorough empirical studies, than have been employed in this thesis. For instance, there are several unresolved issues regarding content analysis in organisational control research which might be fruitfully pursued. One issue could be exploring how other multivariate estimation methods than linear regression, for instance

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structural equation modelling with latent variables, or simultaneous equations analysis of supply and demand, might have addressed some of the measurement issues.

The findings in this study may also have implications for policy and practice. Specifically, I think it could be worthwhile to reintroduce more studies of the classics in management theory. This means educational policy should ascertain that some classical texts (again) are incorporated into the curriculum of management schools and universities. Furthermore, organisational control in political institutions may profit from an enhanced understanding of basic welfare theory and of how politics is dealt with both through protective structures and by political competition. Both policy makers and managers may have relatively more benefits to be reaped by investigating the now extensive conceptual and empirical literature on public sector organisational control, rather than uncritically employing business management models, or the symbolic perspective in new institutionalism without regard for the inherent politics in studies of political institutions. However, politics may be both a normative and a positive issue.

Finally, in order to utilise performance measurement as a local government management instrument, it may be called for a strong actor who can impose valid definitions and reliable measurement of selected PIs and supervise certain levels of development and implementation. In some countries the central government has taken such an active role in the implementation of performance measurement systems. In some instances the central government also demands disclosure of mandatory PIs from local to central government and to the public at large. However, when it comes to the question on how specific local governments ought to use performance measurement in their own internal management, it should be recalled that PIs are used politically and furthermore both are run down and tend to proliferate. Therefore, in order for performance measurement to be used, it could be wise to let the organisations select and monitor those PIs which at any time are found to be decision relevant from the overall performance measurement system.

### TWO THOUGHTS IN THE CLOSING

In the closing of this thesis, there are two thoughts which in particular cross my mind. First, when Moe (1984) reviewed the new economics of organisation with implications

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for the study of public bureaucracy he argued that provocative positions doubtlessly were needed at that point in time in the development of bureaucratic theory. Provocative positions were called for in order to stimulate innovative work on public institutions. Moe stated that in the long run the interplay of theory and data could produce far more complex theories of dynamic political processes and relationships than modellers would like, but that such theories would be more representative of political reality than hitherto were presented. I believe this position still seems to hold true.

Second, when I first began questioning the conventional wisdom proposition in organisational control, I felt more like a lonely heretic than as a student of organisation. However, after a while I discovered that there are many researchers who currently seem to reach quite similar conclusions when questioning the conventional wisdom, and furthermore, that much of the corresponding conceptual reasoning underlying this ‘heresy’ in fact is eloquently explained in nothing less than the much cited classics of organisation theory. Regardless of the classics or my own empirical findings reported above, the conventional wisdom is disputed. The conventional wisdom seems to be lacking strong empirical evidence, at the same time as it has its critics and defenders. Now, in the closing of this thesis, when I propose the suggestions to incorporate more of the classics of organisation theory into the curricula of business and management schools and to do more basic but simple empirical enquiries, it feels like storming the open doors of management theory. On the other hand, this is, if not what normal science ought to be, probably what normal science in organisation and management theory most of the time is, given its relatively low level of paradigm development. Consequently, what seems as wide open doors to some, could be conceived of as solid walls by others. Paradoxically, this highlights the argument for more, and more basic, empirical research, which I have tried to advance in this thesis.

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