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**Implementing Accountable Management  
Reforms in Public Sector  
The difficult travel from Intentions to Effects**

by

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# *Implementing Accountable Management Reforms in Public Sector*

## **The difficult travel from Intentions to Effects**

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### **Abstract**

Over the last decade a number of management accounting practices and techniques have appeared to improve the quality and reliability of management accounting information in public sector. The aim of this paper is to gain more insight into the link between management accounting reforms and organizational learning and change in the hospital sector. Especially, the focus is put on the processes of defining, interpreting and sense-making of accounting information in this complex public sector management. On this background the following questions are put forward:

- How can interpretation of and adjustment to accounting information be understood at macro-hospital level (county level)
- How is a management accounting reform, such as the introduction of a new funding system, defined and interpreted at internal, clinical level in a hospital

Until July 1997 funding of Norwegian hospitals was independent of number of in-patients treated. Now Norwegian hospitals are paid on 60-70% per-case basis (including out-patient services). The hospitals' adjustments to these different systems of budget constraints are analysed by data from the county of Nordland and a case study of a university hospital clinic.

The studies show that the hospitals adjusted to the frame budget system from 1991-1997 by systematically creating budget deficits, which were identified as one dominant budget driver during this period. This adaptation can be defined as experiential, organisational learning. This coupling between the norm system and the action system has to be studied by focusing on the learning processes at the clinical level. The case study shows that the leaders made a different conceptualisation of the new funding model than that of the government. Due to these diverse observations, conceptualisations and concrete experiences at different institutional levels, more ambiguity will occur in controlling hospital activity and cost under the new per-case funding system.

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<sup>1</sup> This paper was presented in an earlier form to the EIASM (European Institute of Advanced Studies in Management) conference on management in Zaragoza, Spain 7-8 September 2000 and to the British Academy of Management annual conference in Edinburgh, UK 13-15 September 2000. The paper has also benefited from comments of participants at the CIMA New Public Sector Seminar, Edinburgh, 21-22 September 2000

## **Introduction**

Over the last decade a number of management accounting practices and techniques have appeared on an international scale to improve the quality and reliability of management accounting information in public sector organisations. In general, accounting information is a key ingredient in the managerial decision making processes in organisations. Thus, the interaction between accounting information and organisational learning should be focused to understand the implementation process of such management reforms. The aim of this paper is to gain more insight into the link between management accounting reforms and organizational learning and change.

Many of the management accounting reforms have been introduced in public hospitals. Modern hospitals can be characterised as large and very complicated, business like production organizations. It is therefore a research topic to gain more insight into the implementation of these reforms in such complex organisations. The management of complex organizations can be defined as the process of translating events and developing "shared understanding and conceptual schemes" (Daft & Weick, 1984:286). In this paper we focus on these processes through which information is given meaning in hospitals as complex and knowledge-intensive organizations. Consequently, the analyses should go further behind the processes of defining, interpreting and sense-making of accounting information in these institutions.

On this background we put forward the following questions:

- How can interpretation of and adjustment to accounting information be understood on macro-hospital level
- How is a management accounting reform, such as the introduction of a new funding system, defined and interpreted at the internal, clinical level in a hospital

The studies presented in this paper focus on two levels of implementation, the county level and the clinical level in a hospital. Adjustments to reform initiatives are experienced differently at the different levels of organisations. In the public hospital sector these levels are interrelated. Adjustments made at the county level is a context for understanding change at the clinical level and vice versa.

This paper is organised as follows: First the theoretical framework is presented. Thereafter the Norwegian hospitals' adaptation to the frame budget system is described by the accounting information found in hospitals' budgets and actuals at the county level. The next section of the paper gives a discussion of the implementation of a new prospective payment system at the clinical level in a hospital. The empirical observations here are based on a case study of a large surgical clinic in a university hospital in Norway. These two different studies are used for understanding the learning process at the county level and the hospital clinical level. In the last section of the paper the findings are discussed.

## **Theoretical framework**

### *Reforms as screenplays or events*

There is a huge literature on the gap between management reform intentions and reform effects. Especially, there has been much international debate on the effects of New Public Management Reforms and the lack of effectiveness gains due to these reforms (Hood, 1998; Olson et. al., 1998). A review of accounting literature reveals that accounting innovations are often subject to resistance, and changes in accounting systems are not made even if they obviously might improve decision making (Scapens, 1994). Studies show that accounting innovations fail to be implemented because the models underlying the innovations were believed to be unclear to the managers who were responsible for the decision outcomes (Roberts & Scapens, 1985).

The reforming of management systems in public sector are complex decision-making processes. From the Carnegie School we have learned that problems and solutions are decoupled, and that decisions often occur through oversight or quasi-random mating of problems and solutions (Cohen and March, 1974; March and Olsen, 1976). New institutional theory gives some analytic tools to develop explanations of the ways in which institutions incorporate historical experiences into their rules and logics (Powell and Di Maggio, 1991) and how adaptation to organisational innovations are

means of gaining legitimacy rather than to improve performance (Meyer and Rowan, 1977).

Implementation of public sector reforms can therefore be described as processes of legitimation and apparent conformity (Meyer and Rowan, 1977), as continuous processes where reforms create new reforms (Brunsson, 1992) and as screen-plays (Czarniawska, 1988).

However, under the New Public management concept we notice that the impetus for reforming is driven by strong rationalistic concepts of administrative practises (Brunsson, 1992; Brunsson and Olsen, 1993, Lapsley 1994a). The management reforms in the hospital sector such as the NHS reforms in the United Kingdom (Lapsley, 1994b) and the reforms, which are spread along to other countries like Norway, are heavily built on the adaptation of management accounting techniques and practices. The idea of accountable management was the means by which public sector management was to be reformed. The delegation of responsibility for costs through the idea of delegated internal budgets to hospital clinics was a part of these reforms (Perrin, 1988; Wickings, 1983).

When such ideas start to travel into the hospitals and are transformed into the internal structures of the organisation, they become a part of the organisational allocation system and the organisational memory. Then the reforms change character from merely screenplays, rhetoric or conformity to more concrete phenomenon in the organisation. They become a part of the events which the hospital staff; the managers, the clinical directors, the physicians and the nurses have to translate, and which they by processes of learning, must develop some kind of shared understanding. Reforms become then signals, which the individual member in the organisation has to interpret and understand.

### ***Reforms as signals***

One obstacle in reforming complex organisations has been a narrow view on the strategic change process. A machine- metaphoric view on organisational behaviour undermines the dominance of the individual actors in generating learning processes.

One way of departure is to view the key-actors in the organisations as translators of reform intentions rather than non-active receivers of stimuli. Strategies for change can be characterised as developing internally in organisations due to interpersonal relationships, rather than mechanistic adherence to external impulses.

Members in organisations interpret events and information in diverse ways, which also generate different understanding and different actions. Reforms are external signals, which have to be received and interpreted by the organisations on individual levels. Literature in this field has developed an understanding of change as elements in the actors' sense-making processes.

Contrary to the arguments given above, New Public Management Reforms have in general been based on a definition of organizational learning according to an instrumental perspective, which has been dominant in much of this managerial literature. This literature has advocated performance measurements and economic rewards as the most important incentive drivers. Consequently, as management accounting systems should serve to facilitate decision making and decision control (Zimmerman, 1997), the systems should be observed and understood by the individual key actors in the organisation where the systems are to be operated. Accordingly, implementation of management reforms should also be studied as a question of organisational learning based on individual experiences and action.

### ***Information as the core element of change***

The literature related to experimental learning is quite varied, and the work of Huber (1991) can serve as a framework for understanding elements of organizational learning in an information processing perspective. We shall adopt Huber's definition of organizational learning: "An entity learns if, through its processing of information, the range of its potential behaviour is changed" (Huber, 1996:126)

This aspect of *information processing* can be viewed as the starting point for understanding reform implementation and organizational changes. This processing can include several interrelated elements (Huber, 1991), of which knowledge acquiring, information distribution, interpretation of information and organisational

memory are among the most important. As Huber (1991) notices, organisational learning as information processing comprises *knowledge acquisition* – the process by which knowledge is obtained. Organisational learning, as a prerequisite for change, should be obtained in the variety of the organisation's components when it is recognised that this knowledge is potentially useful. This *information distribution* describes the way information is shared. When information is shared, it has to be interpreted. The *interpretation* is the process of creating some commonly understanding of knowledge. And the last element of information processing is the means by which knowledge is stored for future use – the *organisational memory*.

The interaction between management accounting and organisational learning is then a key to understand how organizations utilise the accounting tools and how accounting information is used. The framework named above permits a link between accounting information and organisational learning as a method for understanding implementation of management reforms.

Many formal and informal organisational activities are directed towards acquiring information or knowledge. One can split these activities into two main different processes

- congenial learning
- experiential learning

### ***Congential learning***

According to Meyer & Rowan (1977, p 340) “organizations are driven to incorporate the practices and procedures defined by prevailing rationalised concepts of organizational work and institutionalised in society”. This kind of *inherited knowledge* constitutes basic beliefs, cultures and norms in an organisation. In the case of hospitals, professional knowledge and norms create fundamental knowledge-basis for hospital actions.

Another kind of such learning is copying, which is a kind of second-hand experiencing where organisations imitate other organisations because doing so minimises sanctions from a variety of stakeholders. Among others, March (1981)

states that this kind of mimicry is not efficacious when environments are both competitive and fast changing.

### ***Experiential learning***

When moving on from inherited knowledge through mimicry we reach *searching* and *noticing* before we reach experimentation. One of the most pervasive forms of organisational search is performance monitoring. Organisations formally and routinely compare themselves with the expectations of external constituencies, competitors and stakeholders. The development of balanced scorecard (Kaplan & Norton, 1996) and the importance put on the development of performance measurements are examples of organisational feed back used in internal learning procedures. One important element in accounting reforms is the belief in performance monitoring. Following the framework outlined above, this monitoring is a part of the organisational information acquisition. The different information-acquisition processes discussed above can be substitutes for each other. For example, copying can be necessary for learning to occur.

Experiential learning includes circles of concrete experience (registering), reflective observation (making sense of our experience), abstract conceptualisation (classify and define) and active experimentation (design and carry out plans) (Kolb, 1984; Jönsson, 1996). Differently from the machine-metaphoric view on organizational action, the learning process is very complex and the outcome of an implementation process is difficult to predict. Using Kolb's (1984) framework, the learning process is built on two pairs of modes of learning: The apprehension-comprehension dimension and the extension-intention dimension, which represent two different processes of perception and interpretation.

*Comprehension* is conceptual interpretation and symbolic representation of experiences (Jönsson, 1996). This symbolic representation might be a model of a phenomenon, which represents - to varying degrees - the reality. *Apprehension* is the perception of the model: Perception and imitation are learning through apprehension, while mental imagery or modelling is learning through comprehension. As Jönsson



puts it: “Touching and seeing the table is apprehension, trying to define what essential features constitute the concept “table” is comprehension” (Jönsson, 1996:11).

The other dimension, *extension-intention*, represents two paths for facilitating concrete apprehensions or symbolic comprehension. We can apprehend a phenomenon and reflect upon this observation in order to transform it *intentionally* to some general concepts, which we are familiar with. In this way, our knowledge is somehow *extended*. In line with this theoretical framework, it is assumed that effective learning requires complete processes. If concrete experience is separated from abstract conceptualisation, an organization is likely to be a bad learner. The same applies to actors in the organization: Quality improvements are based on the ability of the individual actor to extend current knowledge through attending in the whole learning process or cycle. Improving performance and quality improvements presuppose that the individual actor extends current knowledge through participation in the whole cycle.

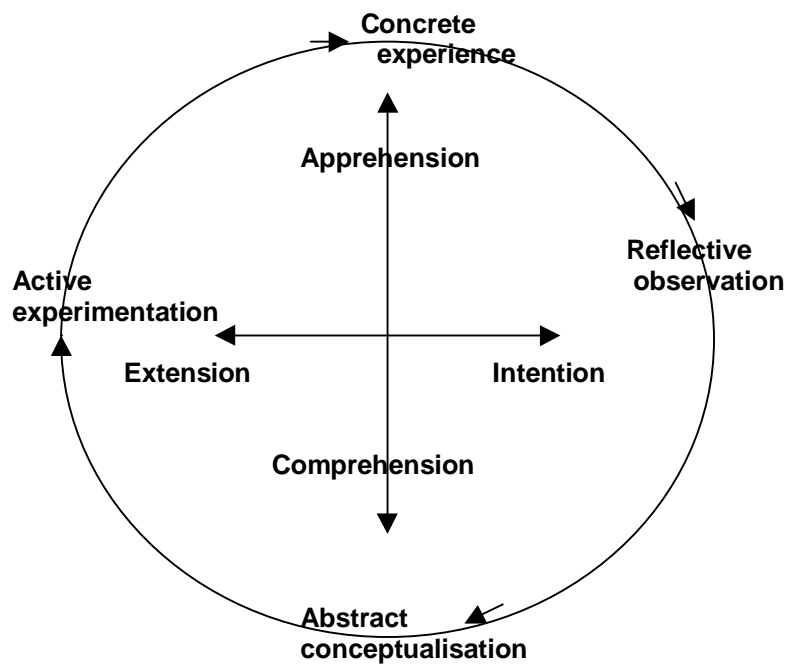


Figure 1: The structure of experiential learning (Kolb 1984 : 42, Jönsson, 1996)

## **The context**

In this section we will briefly present the Norwegian hospital sector as a context for management accounting reforms.

### ***The Norwegian Hospital Sector***

The Norwegian hospital sector is well suited for analysing management reforms. One main reason for this is that in Norway the central state government has a historically legitimated and strong position with strong political power and accepted role as «problem-solver» (Olsen & Peters, 1996; Mellemvik & Pettersen, 1998). Decisions made on this level have direct consequences for each of the 19 counties, which formally own the hospitals (except for 3 central state hospitals). The counties are responsible for the somatic and psychiatric hospitals at the local level. These hospitals have a wide variety of specialist functions and size. The largest county hospital treats about 50.000 in-patients per year, while the smallest ones treat about 1-2.000 patients.

The financing system works on two levels. Firstly, each county receives a fixed grant based on a combination of capitation and sociodemographic variables. Together with other tax income, this grant should (in principle) cover about 50% of the cost of hospital services as well as expenditures to roads and educational services. In addition, 50-60% (dependent on the number of in- and out-patients treated in the hospitals) of the funding from the government is allocated to the county based on the hospitals' activity. Secondly, each county sets a prospective budget for each of its hospitals. This budget is based on the hospitals' tasks, expected activity and historic cost. The hospital budgets have, for the last 25 years, varied between static and flexible (Bjørnenak & Pettersen, 2000).

### ***The frame budgeting system***

From 1975 to 1980 the Norwegian hospitals were paid according to calculated rates per patient day spent in hospitals. In 1980 a new funding system was introduced, based on fixed grant budgets calculated on historic cost and demographic indicators

and some refunds based on activity indicators. This was in fact a static budget with some flexible elements. Outpatient activities were funded separately and on a per case basis, and the fixed budget was adjusted for input price changes and other exogenous variables.

Experiences showed (see figure 2-4) that budget deficits were also used as budget drivers in this period to increase the state government's spending on hospitals. During a period with increasing surplus in the national budget in these years, it was considered politically incorrect not to cover the increasing budget deficits in the hospitals.

The hospital deficits were a national phenomenon, and they were given considerable attention in the media. The hospitals' lack of efficiency was a recurring theme in the political and institutional debates. However, case-mix adjusted cost-data and accurate output-data did not exist neither on hospital nor clinical levels, and scarce cost information made the discussion difficult. One problem as to the covering of deficits by additional grants from the government or from the counties, was the fact that it led to dysfunctional incentives, because it was interpreted as rewarding inefficient hospital behaviour. On the other hand, the budget deficits may be considered a means of flexible budgeting, where the total budget is adjusted for increases in volume and patient-mix (Bjørnenak & Pettersen, 2000).

As can be seen from the outlines above, the budget rules and games were complex. Combined with calculations of frame funding there were a mixture of payments made on per-case funding of out patient services, per-case payments for inpatients from other counties (than the county which owned the treating hospital) and different kinds of "budget packages" from year to year introduced to reduce waiting lists. This was a very complex budget process to understand, but its formulas were based on simple rules. In the empirical part of the paper we shall outline how the hospitals adjusted to these budget rules.

### *The Prospective Payment System (PPS)*

In 1997 the Government decided to change the funding system so that hospitals were paid on 55% global budget scale and 45% per-case payment (Government Note No. 44, 1995-96). In 1999 50% of funds are based on number of index patients and 50% based on fixed grants. However, when including per-case payment for all outpatient and day-patient activities, at least 60% of the funding of Norwegian hospitals is based on number of patients treated. The reason for introducing the change was to increase the number of patients treated in Norwegian hospitals, because waiting lists were according to the political debate, too long and indicated unmet demand for hospital care.

The new per case funding system is based on complex formulas. First a DRG (patient Diagnoses Related Groups) – index system was developed and imported from USA (Fetter et al, 1980). In this system all in- and out-patients are grouped into one of 495 DRGs. Based on cost data from 12 Norwegian hospitals a cost weight system was developed which attributed one specific weight to each patient group (DRG). The cost of index patients is calculated by multiplying the number of patients for each DRG with the cost weight of that DRG. This DRG-system uses 10 different allocation bases to calculate the average cost per patient in each group. The most important cost factor is the number of in-days per patient.

As can be seen from the above outline, the prospective payment system developed in Norway is based on a national standard cost method. All hospitals in Norway are paid according to this standard cost, irrespective of their size or degree of specialisation. Each year the standard price for each patient group (DRG) is adjusted according to inflation. Due to political decisions, however, the standard price for the patient groups was changed for the budgetary year 2000 by the government (Government note No. 47, 1999-2000). One main reason for these political changes in rates was to keep the total expenditures in the hospital sector within the national budget limits.

This reform initiative referred to above is in line with the international trend to introduce more managerialism and market orientation in public sector governance, which is a part of the New Public Management reform intentions. Norway has been a

reluctant reformer, as have the other Nordic countries (Pollitt & Bouckaert, 2000). But at the beginning of the millennium, Norway is heading towards these basic ideas in the NPM reforms (Pettersen, 2000).

## **Empirical data**

In this section the empirical data is outlined. Two sources of data are presented:

- Data on budgets and actuals from a Norwegian county during frame budgets
- Information from a case-study in one university hospital under the new funding system

### *Hospitals during the frame budget period - the case of a county<sup>2</sup>*

According to the Norwegian planning tradition in public sector management, budgets are considered as the central element of management control, because this tradition is built on the normative view which assumes a tight coupling between budget frames and amount of resources used (actuals). Consequently, differences between budgets and actuals are regarded as overspending and therefore treated by the hospital owners as management control problems.

In a typical county council the budget process will start in January year  $t-1$ . At this time the expected income for the time-period year  $t$  up to  $t+3$  is calculated. The standard and distribution of services together with the expected need for health care services in the population for the same period will also be analysed as elements in the budget process. These data together with earlier political decisions make up the basis of the *economic plan* for the next four years. By the political discussion of the four-year economic plan in June year  $t-1$ , the economic resources for the different service-sectors, included the health care sector in year  $t$ , are decided on county level. Since the income estimation is based on signals from the central state government, and as the government financed nearly 90% of the counties' total expenses by frame

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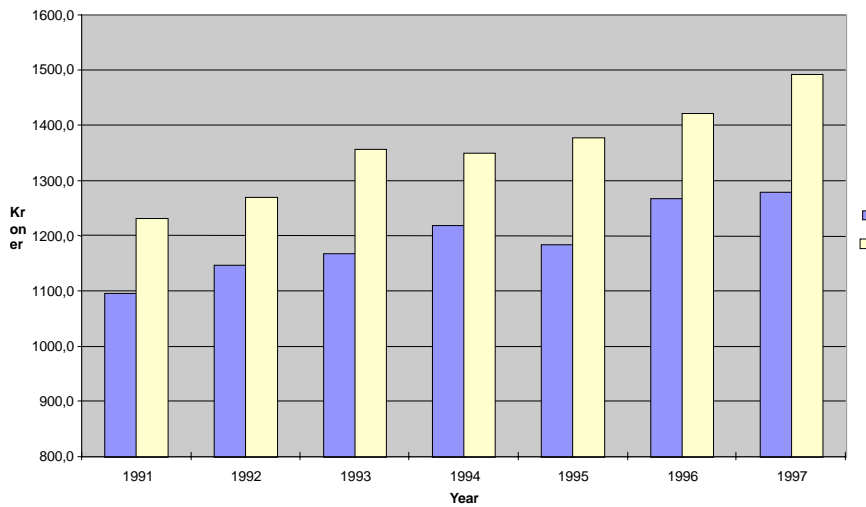
<sup>2</sup> The data are made available by research fellow Jorn Stemland, Bodö Graduate School of Business.

budgeting and taxes, there has been little uncertainty as to resources disposable the next year to come.

This situation has changed according to the per-case system introduced in 1997, see next chapter. By this change in funding system both the county council and the hospitals will perceive more uncertainty in predicting the economic resources disposable.

Figure 2 shows that this normative process description of budgeting does not give an adequate description of the hospitals' adaptation to the budget constraints in a county. We have gathered budget information and cost information from the 7 hospitals in the county of Nordland during the period 1991-1997. This county is the third most northern county in Norway. The figure shows original plan, adjusted plan and actuals for the expenses of the period summed up as adjusted 1997-Norwegian Kroner (NOK) for all the hospitals.

A gap between budget and actuals is observed, which implies that parts of the expenditures caused by the production of hospital care services, were not included in the political decision on the budgets. Although the frame budget system was quite complex to understand, the predictability of budget outcome has been relatively good, see figure 2.



1991-97 (million NOK-adjusted)

Figure 2: Total expenses for the hospitals of the Nordland county

The figure illuminates that the action systems in the hospitals have interpreted the symbolic representations of the plans (the budget model) and adjusted to it during these years in some kind of systematic ways. These adjustments are observed as systematic overspending of budgets, and the owners (the county) interpreted these overspendings as political control problems. However, the hospitals themselves have recurrently experienced these overspendings as budget drivers, since budget deficits were covered by county grants during the following budget year.

Figure 3 shows the total budget income defined as the sum of outpatient funding on per-case basis, different kinds of “budget-packages” and repayments. The figure shows that about NOK 250-300 million of the total expenses were financed by these means.

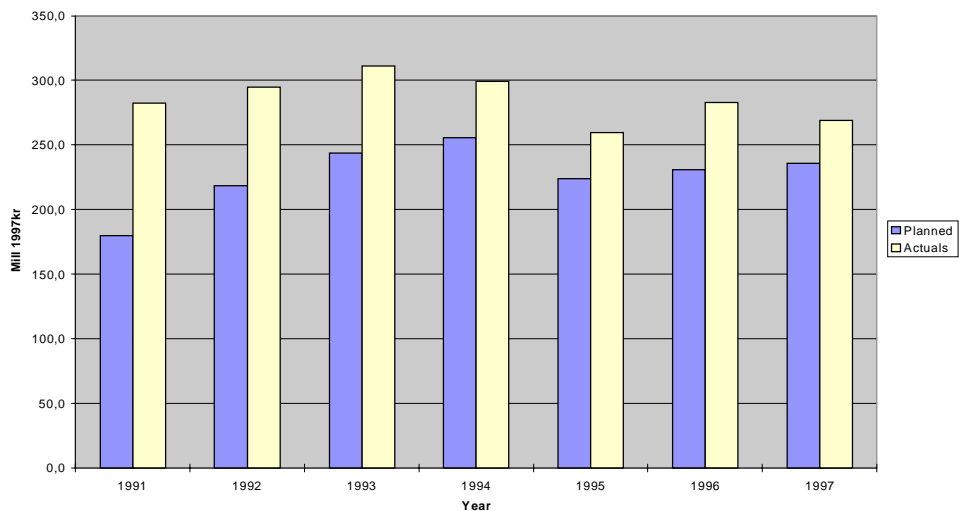


Figure 3: Original planned and actual income of hospitals in the county of Nordland, 1991-97 (million NOK-adjusted)

It can be noticed that the total income does not change much from year to year. But still there is as well a gap between planned income and actual income. The size of the planned budget income has direct consequences for the amount of services to be produced, because income affects planned expenses on hospital level. The difference between actual income and planned income can therefore partly explain the gap between actual and planned expenditure in figure 2. Figure 3 also shows that original planned income for the whole period is at a lower level than the actual income of 1991.

Based on these actuals and the fact that the activity had been fairly stable from one year to the next, it is reasonable to assume that there was marginal uncertainty involved in planning the income. When the plan for next year ( $t$ ) was prepared in August/September year  $t-1$  the hospital should in principle have adequate information to indicate expected income next year at the time of preparing the budget. However, the figure shows that there are loose couplings between planned and actual activity described in economic terms.



This data from the county of Nordland and national data (Pettersen, 1995) show gaps between plans and actuals, both for income and expenses. About 10-15% of the expenses (NOK 150-200 million out of NOK 1200-1500 million) were not included in the political discussions and decisions. Approximately NOK 50 million of the NOK 150-200 million deficit were known at the time the budgets were prepared.

These observations indicate gaps between frame budgets as incentive and behaviour depicted in the accounts of the hospitals. This gap between plans and actuals constitutes a divergence between accounting information in budgets and action defined as accounting practise and behaviour. Behaviour dimensions are therefore introduced as elements in our explanation model.

### ***The Prospective Payment system – the case of a hospital clinic***

As shown above hospital adjustments to the funding system were observed as stable but also rising budget deficits over the seven years period. To understand more about these adjustments at the county level, one must turn to the internal hospital level. To gain insight into this process of organisational learning and change, a case study was conducted in a large university hospital in Norway from 1997-1999.

The aim of the case study was to observe possible effects of the payment reform at the clinical level. This was an explorative design, which allowed the researcher to follow a clinic during two years in a setting where the key informants were in close interaction with patients and administrative tasks. The leaders of the surgical clinic were interviewed during six visits in two years. The interviewer also participated in meetings where the budgets and activities in the clinic were discussed. The research method comprised the interviews of key informants, observation of administrative meetings and document studies in a large surgical clinic<sup>3</sup> at this hospital.

The key informants have provided most of the information used in the case study. While this may have introduced an element of bias to the study, the notion of key informants are well recognised in the qualitative research literature (Rubin & Rubin,

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<sup>3</sup> The surgical division includes other clinical specialities such as heart surgery, surgical laparoscopy centre in addition to the general surgical clinic, which is the largest one.

1995). The interviews and observations from meetings were written down by the researcher and returned to the participants for comments.

This hospital was financed as all Norwegian hospitals according to the new funding system, and the budgets (for in-patient activity) were made on basis of a calculation of 50% per case income and 50% frame budget (Budget formulae decided by the Government for the budget year 1998). The concept of delegated budgets had been introduced in this hospital for several years to make the medical professionals more financially responsible. The budgets were mainly calculated by using historical cost data, which were adjusted by inflation and other political constraints imposed by the county. This budget process can easily be understood as incremental and relying on rules of thumb. In the clinics the budget mainly addresses the wages expenditure, whereas other kinds of direct and indirect costs are more or less prognoses and not included in the budgets as definite budget limits. Consequently, budget control aims at constraining wages, which in fact accounts for about 80% of total expenditures.

A closer study of the hospital's budget documents showed that there was no cost calculation based on patient groups, procedures or specialties. Consequently, the budgets remained like an accounting abstraction that hardly could be used for detailed cost calculation of changes in activity. This is in line with other studies in this field (Jones and Dewing, 1997; Lapsley, 1994).

When the new prospective payment system was introduced in 1997, the hospital had no information about the costs of internal procedures or about patient groups. This was also the situation during the case-study period until 1999. The practices of delegated budget responsibilities were hampered by inadequate cost information on clinical level, and decisions were made without calculation of budget effects. This situation is also documented in other empirical studies (Jones and Dewing, 1997; Preston et al, 1992; Rea, 1994).

The budgets were discussed at a meeting at the end of November 1998 at the Surgical Clinic. Comments on the situation were written in an internal memo:

*"The clinic's income is based on per case calculation according to the Ministry's regulation. But we get only a certain part of this money. The internal budget for the hospital is based on other decisions. It is therefore difficult to make real prognoses of the economic result of the clinic's activity this year". (Internal memo, surgical clinic, the University Hospital, 26<sup>th</sup> November 1998)*

This quotation indicates a fundamental uncertainty as to the effect of the payment system on activity in the clinic. This created a situation of ambiguity when it came to the planning of patient activity and budget constraints in the following budgetary year. There was no connection between the per-case income and activity on clinical level (Internal memo, 1998). This uncertainty introduced a new learning situation for the clinic, as it had to learn through trials and failures to experience how the PPS would affect the clinical life in the next years to come.

The researcher met with the management team of the clinic (the head of the clinic, the chief surgeon, the head nurse, two assistant head-nurses and the administrative consultant) during six management meetings in 1997-1999. Based on the dialogue between these key informants the implementation of the new funding system was observed at the clinical level. The head of financial affairs at the hospital participated in two of these meetings mentioned above. In these meetings the budgets for the coming year were discussed. The following quotations are from these two budget meetings:

*"There is no connection between income and expenses in this hospital. Although almost 60% of our income is dependent on number of patients, it is impossible for us to calculate how this will affect the expenses on the clinical level. We use budget strategies just the same as in the period of the old system". (The head of financial affairs, University Hospital, November 1997)*

As shown here the income side and cost/activity side of the budget is de-coupled. This ambiguity is also underlined in the next quotation, which illustrates a kind of organisational confusion about the financial management of the clinic.

*"We earn about 20% of the hospitals' income from in-patient activities. We have increased the number of patients with about 4%. But still the budget for next year is reduced. I don't understand this". (The head of the surgical division, professor of medicine, University Hospital, November 1997)*

One year after the PPS was introduced, the hospital still holds on to its old budget model, which is based on historical costs adjusted for increases in wages and prices.

*“Our problem at the hospital is that we do not know what the budget will be next year, although it is only one month left. We get paid according to 50% of a calculated price per patient. I have heard that this price will be reduced next year.... So the only thing we can do is to use our own budgetary model. We know that 70% of our expenses are fixed, and they (the politicians in the county – author’s comment) will reduce our budget by 50 mill Norwegian Kroner. That is my job.”* (The head of financial affairs, University Hospital, ultimo November 1998).

The cost and budget information at the clinical level indicate budget deficits, while the incentives inhibited in the PPS system is understood as a means of increasing hospital income by increasing number of patients treated. But as per-case cost information is lacking at the clinical level, the clinical leaders feel themselves as being in a situation without any possible adequate solutions.

*“We have a budget deficit in this clinic this year amounting to 10-15 mill Norwegian kroner. It is impossible to do anything about that. And the head of this hospital wants us to increase activity to earn more money. But I believe we lose money on each patient treated? Should we perhaps close our doors?”* (The head of the surgical division, professor of medicine, University Hospital, November 1998)

*“Every day we reject patients for planned operations, often patients with severe illness. To save money, there are too few people at the intensive care units. I feel this is immoral....”*  
(The head nurse, surgical division, University Hospital, November 1998).

As can be observed from the above quotations there is a gap between the PPS reform intentions and the practical implementation at the clinical level. This gap between the hospital’s income regulations and the clinical action seems to have some damaging effect on the hospital ability to adjust to budget restrictions. An illustration of the kind of dysfunctional learning is given below.

As the PPS was introduced in 1997 the Head of the Surgical Clinic understood this system as intended to increase activity, especially concerning those patients who were on waiting lists. Therefore, the clinic made their budgets for the first year under the PPS system by increasing the number of planned in-patients treated in the clinic from 5.600 to 5.800.

No of patients	1996	1997	1998	1999 *)
In-patients	5.610	5.807	5.880	6.000
Registered DRG-points	6.570	6.707	6.550	6.850
Out-patient consultations	19.150	18.988	20.087	19.000
Day-surgery patients**)	-	-	1.000	1.900
Wages (not price- adjusted) 1000 NOK	-	109.075	118.388	123.055
Estimated budget deficit ***) 1000 NOK	-	2.1million	3,2million	9,3 million

Table 1<sup>4</sup>: Activity and stipulated budget deficits, the surgical clinic, University Hospital 1996-1999

The clinic calculated an increase in income to the hospital amounting to about NOK 10 million (included stipulated effect of better coding practice). This calculation was made on the basis of the DRG price-list for hospitals 1998. However, to reach this goal more hours had to be spent in the producing of patient services. During the year it turned out that costs for the clinic increased more than the calculated effect of increase in income at the clinical level, as wages alone raised from NOK 109 million NOK 118 million. And by the end of the year the budget deficit at the clinic was calculated to NOK 3 million. For the whole surgical division the budget deficit was amounting to NOK 13 million. As the head of the surgical division said: “..I believe we lose money for each patient we treat.....”.

Despite the perception of losing money on in-patient treatment, the budget for the following year (1999) included a slight increase in number of in-patients treated. However, the amount of wage costs increased even more, from NOK 118 million in 1998 to a prognosis in June 1999 of NOK 123 million.

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<sup>4</sup> - Information not available

\*) Prognoses for the clinic

\*\*\*) Prognoses for the clinic. This category is a new one in the clinic’s documents. The clinicians say that the difference between day-surgery patients and in-patients are not well defined. Day-patients can be as resource demanding for the doctors as the in-patients.

\*\*\*\*) The definition of budget deficit is not precise. This is due to problems in the bookkeeping of transfers concerning the activity-based income from the county to the hospital, and the calculation of the amount of income, which is internally transferred from the hospital administration to this clinic. The figures therefore include several adjustments made by the hospital’s central administration, and the figures should be characterised as “flexible”.

In addition to the increase of in-patients there was a change in activity towards more day-surgery. The number of day patients was increased by 900, which was almost twice the number of such patients planned for 1998. As the head of the clinic said:

*“We change to day-surgery because of the new payment rates which are introduced. We believe there is money in this, but we do not know neither the rates nor our own costs in this activity. We hope income will cover expenses”.* (Budget meeting, august 1998).

There was no separate cost information neither for day surgery activity nor for out-patient treatments. Consequently, it was difficult- not to say impossible- to calculate the effect of changing activity from in-patient to day- and out-patient treatments.

In 1999 the clinic reports on a decrease in number of inpatients:

*“ We have 200 less in-patients which indicates a reduction in estimated income to about NOK 3 million. The day-surgery activity has not been increased, due to shortage of doctor-capacity. “.* (Internal budget notes, 21st May 1999).

The quotations sited above indicate that at the clinical level the new PPS system was experienced as increased expenditures and decreased productivity measured as wages expenditures per in-patient treated.

### ***The short term learning experiences in the hospital sector***

At the end of 1999 it seemed as though the learning experience that is described above, had been matched by other clinics in this hospital, because it faced the largest budget deficit for years amounting to about NOK 100 million. The same story was told from the other four university hospitals in Norway, which reported budget deficits amounting to about NOK 700 million.

Because of these rising budget deficits the Minister of Health was in December 1999 asked by the leader of the parliament committee on Health and Social affairs to meet in the parliament to defend him self against the claim that he “has held back information about the economic crisis at the university hospitals “ (Aftenposten, 8<sup>th</sup> December 1999). At the meeting in the parliament committee on 15<sup>th</sup> December 1999 the Minister was heavily criticised for the cost accounting method in the hospital payment system. The minister promised to return in the parliament with a report which analyses the budget situations for the Norwegian hospitals. In May 2000 a

governmental note was passed to the parliament, where NOK 1.2 Mrd were suggested to finance the hospitals' budget deficits (Proposal from the government to parliament No. 47, 1999-2000: About hospital Economy and the budget 2000).

## **Discussion**

In this paper the hospitals' adjustments to external funding systems are studied at two levels, the county level and internal, hospital/clinical level. In this section of the paper the difference in learning processes at these two levels will be discussed.

### ***The macro level adjustments***

The findings based on data from a county in Norway during 1991-1997 show that the frame budgeting system had developed some kind of stable and systematic differences between budgets and actuals. See figure 2-3. On the whole the hospitals adjusted to the fixed budget system in some way, according to Kolb's (1984) vocabulary, by comprehending the abstract *conceptualisation* of the underlying budget model, see figure 1. During these seven years it was noticed that the difference between adjusted budget and actuals is at maximum NOK 200 million, which amounts to 13% of the total hospital expenditure. This difference that is quite stable (although increasing), is a kind of organizational "slack" the hospitals have experienced that they can use for arguing in favour of more resources next year. Thus, the hospitals have acted rationally due to their experiences of the system.

This stable situation during seven years indicates that the experimental phase of the funding system (introduced in 1980) has been passed by. During the many years of experimentation the hospitals have gained concrete experiences, which implies that budget deficits are covered by political decisions in the county. These observations have been interpreted by the hospitals as if deficits are budget drivers. Deficits have been increasing and this can be understood as *extension* of learning, see figure 1: The hospitals as entities have learned how to increase resources by overspending the budgets. As the years went on the hospitals' range of behaviour have been extended as all hospitals in this country made the same adjustments to the budget rules, and

deficits have become larger year by year. This situation finally led to a recurring control problem not only in this county, but also in all the 19 counties in Norway: Hospital budget deficits were rising during the end of the 1990ies at the same time as the waiting lists were high. These problems were the main reasons for the counties to accept the changing of the hospital funding system in 1997.

### ***De-coupling or integration between plans and actions?***

These data confirm the incrementality of the public sector budget processes, which has been recurrently discussed in the literature (Wildawsky, 1989). The data (figure 2-3) can be interpreted in line with conclusions drawn in other empirical studies of public sectors (Høgheim et. al., 1989; Pettersen, 1995; Olson, 1998). These studies point at two worlds of public sector management control where the budgets are made by those responsible for the plans (the county and the politicians), and the actuals are expressions of the actions made by the members of the organisations.

This de-coupling between decisions and actions expressed as de-coupling between budgets and actuals in hospitals can also be understood as hypocritical behaviour in these organisations (Brunsson, 1989). Budgets reflect external norms expressed by the political system. However, the rhetoric that accompanies the budgetary processes is conducted in an attempt to persuade and increase budget limits. This rhetoric reflects norms and values of the client systems (Thompson, 1991). The accounting information expresses the actions of health care professionals in terms of money. Each of these systems (the political, the client and the professional systems) is based on inconsistent norms that the hospital constantly has to cope with through plans (budgets), action (accounting information) and rhetoric (comments on budgets and actuals).

The budgetary process in public hospitals can be characterized as creating a rational image of a process that to a large extent can be understood as legitimation of existence (Brunsson & Jönsson, 1979). According to this logic, management control in hospitals will be the administration of inconsistent norms and values in order to integrate decisions with the actions of the clinical departments (Pettersen, 1995).



The empirical data supports a conclusion that budget deficits were experienced by the hospitals as income drivers (figure 2). It may then be contended that there is not a decoupling between the norm system (the administrative/political system) and the action system in the public hospital system, but the coupling is very complex and hidden into the observation, experimentation and experiences of the clinical staff and their leaders. A more thorough understanding of the learning processes at the clinical level is necessary to throw more light on the coupling between budgets and expenditures at the hospital level.

### **The adjustments at the clinical level**

The Norwegian hospitals had in 1997 to adapt to a new management system. This reform created uncertainty and greater demands on the hospitals' abilities to adjust to changes by some kind of organisational learning. The new funding model led to more perceived uncertainty at the hospital level, because the formulae for calculating prices and hospital income is very complex. Furthermore, relevant cost information was generally not available at the clinical level, and it became difficult to make budget prognoses and to calculate resources disposable.

In the case study of the large surgical clinic it was found that the reform signals in 1997 were filtered on its travel from the governmental decision to implementation in the hospital clinic. This filtering can be discussed according to the organisational learning perspective presented earlier. It was observed that the hospital in 1997/1998 did not know its cost structure neither at the clinical nor at the patient group level. The head of the hospital and the head of financial affairs made internal presentations of the new funding system during meetings with the leaders of the hospital divisions. Here it was stated that this system has incentives for the hospital to increase activity. This was a kind of *reflective observations* of the change in funding system, see figure 1. The *abstract conceptualisation* of the model was a translation of the incentive system inhibited in the payment system as to increase activity to increase the overall income. However, there was no adequate cost information at the clinical or hospital level which could be used to estimate some kind of break-even between activity and cost.

Nevertheless, the clinic made – in line with the director of finance’s interpretation of the system, concrete plans for increases in patient treatments in 1997-1998. This is the *active experimentation* phase in the learning circle (figure 1). As it was noticed above, the *concrete experience* resulted in budget deficits at the end of 1998: The key actors at the hospital clinic apprehended the new funding model as: “Increase activity to increase money “. But the model was not fully comprehended, because the expenditure side of the activity increase was not calculated. Therefore, the head of the clinic had to redefine his conceptualisation for the coming budget year: “We loose money, and we should reduce activity next year.....”.

But according to the comprehension of the PPS model at the hospital level, activity should be kept high in order to increase income. Consequently, the budget for 1999 was made up with an increase in the total activity of the clinic. The clinic had thereby made a new experiment that year which gave new concrete experiences. This implied that activity could be increased *although* budget deficits were the consequence. The budget deficit for 1999 was the largest for years, which also indicated that activity and cost at clinical level were de-coupled from the cost information in the budget figures. The clinic goes further along this circle of experiential learning in 2000. However, the learning process is generated without the necessary cost information to forecast the budgetary effects of changes in action.

### ***Implications***

Introduction of a new funding system is an administrative reform that requires organisational change and adaptation. An effective adaptation to new external impulses for control, presuppose effective organizational learning (Argyris, 1992; Czarniawska-Joerges, 1988; Huber, 1991; Laughlin, 1991). The processes of experiential learning on macro (county) level and micro (hospital) level are illustrated in figure 4.

The study indicates that the leaders in the hospital’s clinic apprehended the new funding system differently from that of the intentions inhibited in the model as specified by the government. Consequently, the budget adjustments were quite contrary to the objectives specified in the new funding system. The budget deficits

were rising and the productivity was falling according to data at the clinical level, instead of bringing more governmental and county control into the hospitals and thereby contribute to better management practices in the health care sector.

The conceptual interpretation of a change initiative can be fragmented and decoupled from one organisational level to another, as here defined as the county level, the hospital and the clinical level. If so, the experiment phase of a reform process will become ambiguous, the concrete experiences will be difficult to understand, and the actors will not fully understand the results observed. Games and rhetorics will occur, as will legitimation processes as adaptation strategy at the organisational level (Meyer & Rowan, 1977). More ambiguity and uncertainty such as increasing hospital budget deficits can be experienced as the per-case reform is being further implemented.

The transition from the frame budgets to a prospective payment system for hospitals based on per- case payments has caused less predictability as to hospital adjustments in the first experimental phase. As the hospitals adjust to the funding system by recurrently passing through the learning circle from year to year, their range of potential behaviour will be changed. Their adjustments to the new payment system should be studied according to their incrementally observing, conceptualising and experiencing of the budget rules as the reform moves on to the later implementation phases in the years to come.

**The frame budget system-macro level**

- 1991 The hospitals get funded according to frame budgets  
 ↳ **Reflective observation**
- 1992 The only way of getting more money is to overspend  
 ↳ **Abstract conceptualisation**  
 The overspending amounts to about NOK 100 million  
 ↳ **Active experimentation**
- 1993 The overspending is accepted by the county-council.  
 ↳ **Concrete experiences**  
 The only way of getting more money is to overspend  
 ↳ **Extension of observation**  
 The overspending amounts to about NOK 140 million  
 ↳ **Active experimentation**
- 1994 The overspending is accepted by the county-council.  
 ↳ **Concrete experiences**  
 The only way of getting more money is to overspend
- And so on.....
- 1995 .....
- 1996 .....
- The recurring process of experiential learning has extended the hospitals' apprehension and comprehension of the frame-budget system. This extension of observations (budget deficits as income drivers) in the county of Nordland has increased the amount of budget deficits throughout the 1990es.*
- 1997 *In this year the budget deficit amounted to more that NOK 200*

*million and was increasing in the years to come*

**The per case system –micro-level**

- 1997 The head of the hospital:  
 "The payment system has changed to 50% per-case payment.."  
 ↳ **Reflective observation**  
 "We have to treat more in-patients.."  
 ↳ **Abstract conceptualisation**
- 1998 The head of the surgical division:  
 "We will increase number of in-patients by 4%. This is our plan ..." (February)  
 ↳ **Active experimentation**  
 The head of the surgical division:  
 "We lose money now by increasing activity. In this clinic- NOK 3million at least.." (November)  
 ↳ **Concrete experiences**
- 1999 The head of the hospital:  
 "Although budget deficits – keep activity high...." (January)  
 ↳ **Reflective observation**  
 The head of the division:  
 "If activity is to be kept high- we lose more money..." (January)  
 ↳ **Abstract conceptualisation**  
 The head of the division:  
 "Activity is high and stable. We are happy to follow the hospital's main policy.... Although deficits are rising" (March)  
 ↳ **Active experimentation**  
 The Head of the clinic:  
 "Activity is now less than the level last year (included day-surgery). But estimated budget deficit is uncontrollable. NOK 9 million at the end of this year? This is a screen-play (June)  
 ↳ **Concrete experiences**

*The reform signals (prospective payment system) are apprehended, but filtered on its travel from the Government and the Ministry of Health to the Hospital. The complex formulae (inhibited in the PPS system) creates uncertainty at the Hospital level. The model is here apprehended differently than the intentions of the system at the state level. Intentions are different on different system levels (Government-County Council and hospital/clinical). Local level comprehension of the payment model is extended in the hospital by active experimentation and overall hospital deficit is still rising. Although PPS operates on its margins (in principle) the comprehension and experimentation of the model at the clinical level increase deficits and consequently the control problem increases because of dysfunctional experiential learning on the organisational level.*

**Figure 4: The process of experiential learning on macro (county ) level and micro (clinical level)**

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## APPENDIX

### SUM Expences (1997 adjusted Norwegian Kroner, 1.000)

	1991	1992	1993	1994	1995	1996	1997
<b>Decided</b>	1095,5	1147,0	1167,3	1218,4	1183,3	1268,0	1278,7
<b>Adjusted</b>	1193,9	1230,9	1267,5	1257,8	1314,6	1374,8	1398,2
<b>Actuals</b>	1231,2	1268,8	1356,7	1349,8	1377,8	1421,2	1493,1

### Income (ekskl DRG)

	1991	1992	1993	1994	1995	1996	1997
<b>Decided</b>	179,6	218,1	243,5	255,8	223,8	230,7	235,7
<b>Adjusted</b>	244,4	250,8	263,7	258,1	238,6	253,1	236,4
<b>Actuals</b>	282,3	295,0	310,8	299,4	259,5	283,2	269,2

### Underbudgets as part of total budget increase (adjusted for DRG-income)

	1991	1992	1993	1994	1995	1996	1997
Increased net budget	-9,4	12,9	-5,0	38,7	37,0	37,8	5,7
Netbudget							
Uncovered	18,6	64,2	51,4	55,0	75,6	28,7	47,5

### Underbudgets as part of total expenditures (actuals) (adjusted for DRG-income)

	1991	1992	1993	1994	1995	1996	1997
Actuals	135,7	121,8	189,4	131,5	194,5	153,2	214,4
Uncovered	18,6	64,2	51,4	55,0	75,6	28,7	47,5