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Performance Measurement in Defense

**The Difficulties of Measuring Efficiency and
Effectiveness in Defense**

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1. Introduction

The thesis deals with the issue of using performance measurement in public sector financing, and within that deals with the difficulties of measuring the performance of Hungarian Defense Forces. The choice of topic is all the more current, because there has been an emergence in Hungarian public thinking of the need for using performance assessment in public administration, so much so, that the accountability on performance has been lifted into law.

Hungarian regulation however cannot be called thorough and satisfactory, since although principles and expectations are in harmony with international practice, but the basic conditions of implementation, and the possible ways of establishing these conditions did not fall within the scope of any study.

The objective of the thesis – acting as a gap filler – is that in the case of one of the important players of the Hungarian public administration, i.e. the Hungarian Defense Forces, to study the possibilities of implementing the system of performance measurement within the current frameworks. At the same time, it aims to identify those regulatory areas that are currently the obstacles to operating a system, which is capable of measuring efficiency and effectiveness.

The study reviews the practice of performance measurement in the case of different foreign Armed Forces, but does not have an objective to provide any suggestions for the establishment of a Hungarian system of performance measurement in defense, it only aims to identify the rules and regulations, which currently are obstacles to the establishment of such a system.

The precondition for introducing performance management, controlling and for the integration of data on financial and professional performance, is a well-established and well functioning accounting information system.

The study has a separate chapter, in which it looks through Hungarian and international accounting terminology. The chapter also clarifies the conceptional discrepancies in Hungarian literature concerning the two sub areas of accounting, financial and management accounting, and at the same time compares the objectives and tools used by these two sub areas.

The third chapter of the study deals with controlling. There have been numerous publications appearing in Hungary in this topic that are based on international literature, so the thesis only touches upon this area to the extent required by the purpose of the study and will not go into further detail.

Chapter 4 deals in general with the differences between the budgetary and market organizations, which – as the changing approach over the last decades in respect of the public sector, and the fact that certain state services are provided by market organizations show – have been occasionally overemphasized.

It is however important to highlight, that state owned organizations tend to start from a less favorable competitive situation, since their management falls within the scope of numerous regulations, which determine quite significantly the allocation of resources, and do not allow rapid and flexible reaction.

The chapter also looks through the history of accounting in the Hungarian public sector, and compares the accruals and cash based accounting systems, introduces the international trends of transition to accruals accounting. Quite naturally, implementing accruals accounting, although it provides more information for the assessment of performance, also carries a higher cost. Thus, changing the accounting system cannot be the initial step of the reform of the public sector, it first has to be clarified what objectives the accounting system has to serve, and it is only

than, that decisions can be made whether accruals accounting is necessary to realize these objectives.

Chapter five deals with the international experiences of public sector reforms and studies the objectives of the reform, the organizational changes aimed at fulfilling requirements of financial and performance management, and studies the performance information system. Following a comparative analysis, the experience of the United States of America and the United Kingdom are introduced in more detail, with a special emphasis on results achieved in defense sector.

Chapter 6 discusses the concept of performance measurement, reviews requirements vis-à-vis performance measurement, and also articulates benefits expected from the system. It introduces international models established for performance measurement and the international practice of performance based budgeting and management. This line of thought is concluded by the comparison between performance audit aimed at justifying performance measurement information and traditional auditing.

Chapter 7 introduces a tool, the balanced scorecard system, which is suitable for the integration of professional and financial performance, and facilitates the development of the organization in the future. Following a short summary of Hungarian experiences of implementing the Balanced Scorecard in market organizations, the thesis goes on to introduce the solution developed by the UK Ministry of Defense, which now is looked upon as the framework for defense performance management in the UK.

Chapter 8 discusses the impacts of the international reform trends in public sector, which places in the forefront performance management, in Hungary. Besides ordering the establishment of indicators to measure efficiency, and the fact that

methodology is still under development, Hungarian regulations primarily approached performance measurement through outcome, and mandatorily prescribe the measurement of consumer satisfaction to study effectiveness.

Chapter 9 shortly introduces the management system of the Hungarian Defense Forces, with a special emphasis on the characteristics of central and institutional management and the accounting system.

The novelty of this thesis is that research assumptions, first in Hungarian literature, primarily study the basic conditions of the implementation of reform and two hypotheses are used to prove that within the current framework there is no possibility for the measurement of efficiency. It concludes that there are changes required at government and portfolio level in order to establish those basic conditions.

The third hypothesis proves, that the tool of public surveys in order to measure effectiveness cannot be used to measure performance in the defense sector. It can be a good method in the case of certain public services, but I use the third hypothesis to prove that in the case of defense, such surveys will tend to show the success of the media strategy rather than the performance of the organization itself.

2. Accounting

2.1. Accounting

A given system can be characterized at two levels: on the one hand with the flow of material assets, which could be looked upon as reality, and also with the projection of reality, i.e. with the flow of information about these movements. The objective of the flow of information is to be able to control real processes (Anthony, 1988.). However, when establishing an information system, we have to take into account, that information is a resource, which has explicit and implicit costs.

The method aimed at projecting reality is accounting, the history of which goes back a long time. Numerous authors stated, that it was the Italian Paccioli in 1494 that developed double entry bookkeeping, while several researchers emphasized, that Paccioli only published what had already been functioning well in practice (Ashton at al, 1991.). Certain authors say, that even the industrial revolution 200 years ago would not have taken place this way without accounting. It was the accounting that provided the most basic financial information about economic activities; this was the language of business, which was indispensable to support technological development (Herbert at al, 1987.).

In the recent periods besides accounting, the use of the terms financial and management accounting has also become popular in Hungary. The use, however, of these terms is many times misleading and confused. Many authors try to blame accounting for the fact, that information provided by the accounting system was not used appropriately, and that in many cases internal accounting systems were built with deficiencies.

Wimmer talks about the change in the organizational role of accounting, saying that “in contrast to external reports, information to support management has gained

importance” (Wimmer, 2000.), which we could also phrase another way, that they had realized the inherent potential of accounting, and are trying to put that to the service of management.

Budai depict the relationship between management decisions and the data hierarchy in accounting according to Figure 1.

Decision makers	Type of decision	Levels of accounting data
Owners and higher management	Strategic decisions	Balance sheet
Middle management	Tactical and regulatory decisions	General Ledger
Operative control	Operative decisions	Analytics
Employees	Implementation (Transactions)	

Figure 1: The relationship between accounting data hierarchy and management decisions.
Source: Budai, 2002.

According to the categories defined by international literature, the Hungarian term of accounting covers two distinct areas: financial accounting and management accounting. Financial accounting serves to provide information to all the external stakeholders (state, investors, competitors, etc.) of a given economic entity. It provides a reliable and realistic picture of the situation of the assets, the finances and the income of the given organization, according to such a transparent and integrated form, which allows comparison with other market actors (Adorján et al, 2002.).

Management accounting serves to provide information to internal users, and provides the information basis for decision-making. It depends on management decisions what sort of calculations and reports should be prepared, which are the main dimensions about which information needs to be gained.

The notion of accounting in Hungary covers both areas (Baricz, 1999.), and beyond the accounting activity serving to justify the annual report, it also comprises different methods of unit cost calculation, break-even calculation, etc.

Management accounting information is primarily used within the organizations, and access by third parties to this information can be in certain cases detrimental even to the competitive position of the company. It is for this reason, that there is no need to have a standardized system for management accounting; every organization can develop the substance, the format, and the frequency of data provision according to its own needs (Tóth, 1999.).

Boda and Szlávik have suggested the term “external accounting” and “internal accounting” for the international terms of financial accounting and management accounting, because management accounting is just as much financial as financial accounting itself is (Boda-Szlávik, 2001.).

Stolowy and Tournon, however, deny this approach. They say, that many characterize financial accounting as being externally oriented, although it has many internal users, not to mention the managers, who should be the first to be interested in knowing the financial situation and the profit of the organizations. However, they think that management accounting analyzes only certain activities, certain organizational units and certain products, hence does not provide comprehensive information about the totality of the performance of the organization, thus it primarily serves internal needs (Stolowy-Tournon, 1997.).

In my opinion, the majority of the misunderstandings in Hungarian literature is rooted in the fact that standardized accounting regulation only pertained to the field of financial accounting. As stated earlier, with this we establish the possibility to compare the performance of the actors in the economy. Reports on the operations of

different organizations are prepared according to identical principles, processes and rules, and comply with identical requirements on substance.

In the absence of standardized regulation for management accounting, this area was many times neglected, steps were not taken to establish an internal flow of data to support management, and this was always blamed on accounting.

There is another frequent mistake in Hungarian literature, rooted in the misuse of terminology; accounting is many times criticized because of its past orientation. According to Grimshaw the emphasis for example shifted to the fact that management needs to have information, which makes it possible to plan for the future, and management needs to step beyond the registration of past results. He calls this function of accounting “management accounting”, a term that covers all those accounting methods, systems and techniques, which coupled with specialist knowledge and skills can help management maximalize profit and minimalize losses (Grimshaw, 1993.).

This supposed deficiency, as we see, is mainly caused by the fact, that accounting itself was interpreted as purely financial accounting. The main objective of financial accounting cannot be anything else, but the preparation of a reliable report covering a recent period, mostly a year (Reke-Berényiné, 2001.). If in this report we do not rely on data stemming from events of the past, than we disregard many basic principles of accounting, so reliability and comparability of the reports is going to be severely questioned.

Management accounting, however, can have any type of orientation according to management needs. The point of depart is the data of the past to provide a reliable basis, since it is easier to forecast future situations with a larger probability, if we

study trends in the past. If we disassociate ourselves from the facts, our system is going to be unreliable guesswork, which should never be called accounting.

2.2. Management accounting

Looking at its history, management accounting derives from cost calculation techniques developed at the end of the 19th century in England. Cost calculation techniques became important from the second half of the 19th century, because as a result of technical development, the scope of local business widened, thus the organization grew as well as the indirect costs, so the unit cost of a product was not so evident anymore.

Management accounting research flourished from the end of the 1950s until the mid 1970s in America. By the 1980s, the gap between the theoretical basis for management accounting and the methods used in practice grew rather large. It was Johnson and Kaplan who articulated perhaps the widest known criticisms in their book titled “Relevance Lost: The Rise and Fall of Management Accounting” (Johnson-Kaplan, 1991.). According to their opinion, management accounting system was not adequate for the modern requirements of competition (Ashton at al, 1991.).

Chadwick characterizes management accounting according to the following:

1. The flow of information provided by management accounting allows managers to react at the earliest to any emerging problems or situations. Consultations are required with the users of information, the managers, in order to ascertain their need for information and the timing of information required etc.

2. It provides advice to managers to explain the economic consequences of their decisions and alternative actions, as well as to discuss information related to implementation.

3. Based on organizational objectives and forecasts for the future, it also helps to plan expected performance and to compare that with actual figures.

4. For the success of a management accounting system, it is indispensable to have a reliable and efficient communication system. Clear communication and understandable formats are required (reports, analysis, tables, diagrams, graphs), but at the same time information should not overburden managers.

5. The system has to be flexible enough in order to react rapidly to organizational or environmental changes.

6. It is essential to be aware of the role that other business functions play, cooperation and coordination is also necessary with these functions, especially when preparing a budget.

7. Users of the information have to be knowledgeable about methods used, have to know the benefits and the restraints of these methods, thus great emphasis has to be placed on the training of the staff.

8. Management accounting is not an exact science; the majority of information generated is subjective. Management accounting is not of primary importance in decision-making; it is only one of those tools serving the needs of the management, which helps more justified decisions (Chadwick, 1999.)

Herbert and his co-authors emphasize that a system to be established has to be able to also collect and use statistical data, performance and efficiency indicators

beside cost figures. They define the areas of management accounting according to the following:

1. Cost estimation: aiming at planning and controlling.
2. Planning: e.g. to show whether there is a need for a new product, a new service or a new installation.
3. Cost control: to monitor costs whether they are acceptable in the case of a given activity.
4. Performance management: for management assessment to see how efficiently the organization was managed.
5. Motivation of management: to provide for the integrity of objectives. Standards, budget and performance measurement methods have to be established in such way so that they are suitable for motivation (Herbert et al, 1987.).

According to the definition of Bartók Nagy management accounting is such a system of organization, planning, accounting, evaluation and information provision which has the objective of providing the necessary data and information (for decision making, planning, monitoring, assessment) to the organizational units that helps to maximize outputs and outcomes.

The main objective of management accounting is to provide unit cost calculation, to provide information assisting decision making – for which the main requirement is continuity, precision, applicability, clarity and timeliness – support planning and controlling (Bartók Nagy, 1997.). Management accounting however can also serve to support strategic decisions for which precision is less important (Cooper, 1993.).

2.3. The comparison of management and financial accounting

Herbert and his co-authors had the opinion that management accounting as opposed to financial accounting:

- places a greater emphasis on information required for planning, programming and decision making;
- beside adherence to regulation and advancing financial accountability it supports management control by developing cost standards and preparing reports on any deviation from those standards;
- provides internal management reports on activities to the different levels of management;
- where possible, it supports the cost consciousness of managers;
- is better tied to decision making and setting performance, than to fiscal control (Herbert et al, 1987.).

The differences between financial and management accounting are set forth in Table 1. according to Bartók Nagy:

Financial Accounting	Management Accounting
The principles and substance of financial accounting are determined by law.	The principles and substance of management accounting is to be developed by the entrepreneur.
The principles and substance of financial report is regulated by law.	There are no legislative regulations either on the obligation to prepare the report or on its substance.
The financial report concentrates on the whole of the enterprise, and its information is primarily in value.	Management accounting concentrates on the units of the enterprise and on their products. It utilizes indicators of quantity, as well as information on value.
In financial accounting, the data on the past is decisive.	In management accounting besides data of the past planning also uses future data and information.

Table 1: The comparison of financial and management accounting.

Source: Bartók Nagy, 1997. p. 10.

Boda and Szilávik have prepared a more detailed comparative table (see Table 2) to show the differences between financial and management accounting.

Areas of comparison	External Accounting Requirements	Management Accounting Requirements
Users	Individuals and organizations outside the business unit: - state, - owners, - shareholders, - business partners, - debtors, investors.	Management
Substance	According to the Accounting Act	In accordance with the Accounting Act, but according to the rules of business processes
Format	According to the Accounting Act	To best demonstrate business processes.

Accounting methodology	Double entry bookkeeping	Is not restricted to double entry bookkeeping. Any other system consistent with that can be used.
Criteria	Should be objective, controllable and consistent	Should be relevant, useful and comprehensible
Reality	Actual	Forecast, plan
Studied period	Usually 1 year	As required by efficient management
Time period	Past	Present, future
Frequency	Annually	Monthly
Delay	1-4 month	Maximum 1 week
Organizational focus	The whole of the company	Broken down to organizational units
Activity focus	The complete activity of the company	Broken down to activities and products
Unit of measurement	Nominal value	Any other value (e.g. fixed price) or any other useful volume units: price, working hours, machine hours etc.
Data type	Balance sheet Profit and Loss Statement Cash-flow Statement Notes to the financial report	Balance sheet Profit and Loss Statement Cash-flow Statement Information on the environment Market information Sales information Production information Stock data Procurement information Investment information Human resource information etc.
Structure of profit and loss statement	According to the Accounting Act	To show the profit by activities

Main emphases	To provide the most precise picture about the impacts of transactions on the assets and incomes	Timeliness
Focus points	The general economic situation of the enterprise	Cost management

Table 2: The comparison of external and management accounting requirements.

Source: Boda-Szlávik, 2001. pp. 93-94.

When analyzing the table above, we can see that the differences are exaggerated in several areas, because the two columns of the table show two approaches to the same thing, and not two fundamentally different systems. One of these exaggerated differentiations is frequency, since financial reports in financial accounting can be generated not only once a year. The practice of leading companies shows, that in fact financial accounting information is generated more frequently than this, and in the case of budgetary organizations the regulations themselves require a greater frequency.

The borders between the two areas are also disappearing when it comes to the break down of activities, since data referring to the overall activity of a company is always generated as a sum of the data of activities in the different areas. Thus, we can say that the performance of the company overall is the sum of the performance of the individual organizational units.

According to the comparison of Garrison, management accounting is different from financial accounting, since:

- it primarily provides information for internal use by management;
- it places a greater emphasis on the future;
- it highlights the relevance and flexibility of the data;

- it places a smaller emphasis on precision and places a greater emphasis on non-financial data;
- it highlights organizational segments and does not look at the company as a whole;
- it relies significantly on other sciences;
- it does not need to comply with Generally Accepted Accounting Principles;
- it is not mandatory (Garrison, 1991.).

According to the opinion of Czink, financial and management accounting are separated in developed market economies, while in our country this separation has not taken place yet (Czink, 2002). The comparison of Anglo-Saxon and German type accounting systems, however denies this remark, and it can be seen, that it is not an indicator of development, whether the two systems are separated or not, but is rather defined through the tradition of accounting.

Erős points to the fact, that registering the costs by activities was basically mandatory before the Accounting Act came into force in 1991. It emphasizes that the introduction of the new Act forced management to only keep this otherwise costly system of accounting in place, if the size of the company and the variety of activities requires that (Erős, 1993.).

3. Controlling

3.1. *The emergence of controlling in Hungary*

Controlling as a management tool developed from the treasury function of public finances, the person supervising the financing was called the controller. The Controllers' Institute of America was established in 1931 in the US, they published an official journal titled *The Controller* (Körmendi-Tóth, 2002.). Controlling started developing in Europe from the 50s and 60s, whereas research has been conducted in Hungary since the 1990s¹ (Bordáné, 1993.).

It can be said on the basis of Hungarian experiences, that controlling solutions were primarily introduced by organizations in the market sphere, and publications also referred to this area (Csikós at al 1993; Francsovcics 1995; Horváth 1995; Kapitány 1991; Körmendi-Tóth 2002; Salamon 1993; Somogyi 1994.).

Bodnár provides a comprehensive description to interpret controlling (management function, tool set supporting management, regulation, information system) (Bodnár, 1997a and 1999.). There are numerous sources in literature which discuss not only controlling, but accounting as the basis of controlling (Bodnár, 1997b, Bordáné 1991; Bordáné 1993; Ladó 1990; Ladó 1992; Sinkovics, 2002; Soosné 1995; Sutus 1999.), whereas other authors also provide a manual for the introduction of controlling (Mann-Mayer, 1993.).

In the early years, there was quite a lot of criticism directed towards company managers, that by misinterpreting the approach of controlling, they do not establish a suitable system. What they did was just rename departments responsible earlier for internal audit, while leaving their previous tasks the same, and thus only

¹ In the Hungarian literature in the early years numerous contested translations appeared. Ladó e.g. translated controlling as profit management (Ladó 1990.), Bordáné translated management control systems as management supervision systems (Bordáné, 1991.) etc.

increased the workload by requiring new reports, but did not benefit from the potential offered by controlling.

Analyzing Hungarian corporate practice Bodnár states, that controlling mainly concentrates on financial data, primarily serves to support higher management, is rarely used to motivate lower levels, or to help decentralized decision-making (Bodnár, 1997c, 1999.).

Jenei, while separating controlling and internal audit function, at the same time emphasizes the importance of co-operation between these two areas. Per definition, internal audit compares actions, facts, and situations with requirements, guidelines, regulations, and sets forth proposal for management after analyzing the difference between the afore mentioned. According to his interpretation, controlling can also be defined in the same way, but here it is not regulation to which we compare, but the plan (Jenei, 1995.)

Controlling is one of the subsystems of management, the objective of which is to compare data of planning and implementation, and in analyzing this, to provide information to decision makers on the status of the organization, and if the organization is not heading into the required direction, then to provide a possibility for timely intervention.

Horváth and Mészáros highlight that controlling does not impact the responsibility of managers for result, controlling only provides the transparency, necessary for justified decisions, and provides information, decision support and coordination services (Horváth-Mészáros, 1997.)

According to the definition of Bartók Nagy, controlling is an integrated system of management techniques, mainly based on accounting, which allows people

working in the organization to meet the goals set forth in strategy (Bartók Nagy, 1997.).

3.2. Types of controlling

One of the most well known classifications of controlling was made by William Ouchi, who differentiated between bureaucratic, market and clan control. Bureaucratic control studies adherence to rules, while market control sets forth standards, mainly articulated in financial terms, for the process or the output. Both for market and for bureaucratic control it is a precondition that the performance of employees or organizational units be measurable either by output or by evaluating the processes (quoted by Bodnár-Dobák-Császár, 1996.).

In terms of its timeframe, there are three different types of controlling: task control, management control and strategic control. A well functioning controlling system can only be construed by covering all three different types of controlling, but all three requiring different approach and different tool sets (Horváth, 1995.).

Robert Newton Anthony said, that management control is a process, through which managers influence other members of the organization in order to implement the organizational strategy (Anthony, 1988.).

Strategic planning aims to establish the long term goals of an organization, and the strategy required to achieve these goals is also decided on. It provides general guidelines as to what kind of activities are deemed necessary for the achievement of these objectives.

One of the main differences between management control and strategic control is regularity (Anthony, 1988.). Strategic plans are not modified at a predefined time, but are modified in situations when a given market or a sector shows substantial changes in the basic conditions. There is also further difference in management

levels, since top managers decide on strategic plans, while management control has an impact on every level of management.

Task control aims at providing for the efficiency of the implementation of elementary tasks. In comparison to management control, it has a shorter scope of time and it is carried out at a lower level of management.

If we look at another way of classification of controlling activities, we can also talk about operative controlling and project controlling. The main activities in both cases are programming, budgeting, implementation, assessment; the methods used however are different (Horváth, 1995.).

3.3. The controlling function

Controlling cannot be construed as being an incentive for strict realization of the plans, since these plans were approved by managers, on the basis of assumptions valid at the time of approval, and if the assumptions underlying the plan change, or if events happening differ from those set forth in the assumptions, then the plan itself has to change also. The organization's objective is not to implement a plan, but is to achieve its strategic goals.

In order to steer the organization towards its objectives by comparing plans and actual figures, it is necessary to ascertain the difference between actual costs and planned costs; to analyze deviation; to discuss deviations with the responsible people; to define the reasons for the deviation and to make corrective measures (aimed at adjusting the plans or improving the efficiency) (Csikós et al, 1993.).

When studying the difference and defining the reasons, it is crucially important not to fall into the trap of using the so-called "sergeant" approach (Hurton, 2002.). This means that the objective is not to reprimand staff, because then the employees will become interested in covering up the real reasons for the difference. Instead of

looking for the culprit, controlling should be forward looking, and should draw the lessons important for the organization itself (Salamon, 1993.).

Occasionally, the reason for the difference is the unrealistic plan, thus its original objectives related to a program or a project need to be revised. Sometimes the reason is the lack of effort or a misunderstanding, because of the poorly communicated expectation. Factors that managers cannot influence sometimes also cause such differences. There is a need for intervention in these cases, but first it has to be studied whether the proposed action will actually correct the situation (Herbert at al, 1987.).

Controlling also has the task of defining the organizational objectives, collecting and processing information required for decision-making and for economic planning, comparing actual and planned data, uncovering the reasons for differences between the two and defining areas for intervention, while also providing the necessary information for management (Bodnár, 2001.).

According to Anthony and Govindarajan during the course of management control activity, we have to plan what to do, have to send the information to the relevant users, and we have to be able to assess implementation, decide on necessary intervention and to influence people to change their behavior (Anthony-Govindarajan, 1998.).

The early definitions of control placed the emphasis on reactive intervention, however nowadays it is continuous monitoring that is considered important, and the establishment of a system, which will already signal problems before they arise. According to the definition of Mockler this is a regular activity, during the course of which performance standards are established in accordance with the planning objectives, information feedback is provided for, actual activity is compared with

standards to see if there is any difference, the significance of this difference is measured and necessary measures are taken to have a more efficient and more effective use of resources in order to achieve organizational objectives (Mockler, 1989.).

The establishment of a controlling system has to start with the definition of the information requirement: the content, structure, scope, regularity (regular or occasional), form (verbal or written), analytic methods and documentation of reports has to be defined (Anthony-Young, 1988.).

Salamon classifies information according to three dimensions into eight categories: qualitative or quantitative, external or internal, regular or ad hoc. He points to the fact that information systems fundamentally aimed at handling regular, internal and quantitative information (Salamon, 1993.).

When talking about the requirements on information, Grimshaw says that information needs to be useful, needs to provide assistance to the management, needs to be precise and comprehensive, needs to be timely and adequately detailed. He also highlights that the provider of information should always get a feedback from the management (Grimshaw, 1993.).

When introducing controlling in defense sector, the laws of controlling bureaucratic organizations should be taken into account, because of the size of the organization and its complexity:

1. The law of imperfect control says that large organizations cannot be controlled perfectly, thus, we are in a contradiction with the formal requirements of bureaucratic organizations.
2. The law of decreasing control says, that the larger the organization, the weaker the control of top management over the employees.

3. The law of decreasing coordination says, that coordination between the different activities decreases with the increase of the size of the organization (Vígvári quoting Gulyás, 2002.).

4. Characteristics of management in the public sector

4.1. The budget

The operation of public sector organizations is based on a budget, which provides the legal basis for the use of financial assets and accountability. The budget is a financial articulation of the activities of the given public sector organization which identifies expected revenues, provides the mandate for the execution of tasks and allocates expenses to them.

In order to establish transparent budget, the International Monetary Fund considers it important to have roles and responsibilities clearly defined, information publicly accessible, to have an open budgetary planning and implementation process, as well as a reporting system, and to have, as an independent safeguard, external audit (Csonka-Lehman, 2000.).

Other actors of the market sector can also prepare budgets, but in the case of budgetary organizations, this also constitutes a spending limit for the given organization, and different members of the executive or interest groups can influence the budget.

The category of profit has a special interpretation in the case of budgetary organizations. The balance of the budget requires that revenues and expenditures be always identical. If revenues are larger, than it means that taxpayers' money was collected unnecessarily, or some state services were not provided in the way planned.

The preparation of the budget also serves as an incentive for the managers to develop plans, provides information to them about the expectations and contributes to establishing the commitment of the leadership, coordinates the different activities of the organization, and provides a norm for the assessment of actual activities (Anthony, 1989.).

Budgetary organizations are thus different from market actors in that they operate within predefined limits, there is a given spending limit, the budget appropriation. Market organizations can influence their available resources through their production activity, whereas in the case of budgetary organizations the amount and the allocation of resources are dependent on a political consensus reflecting socio-political objectives.

The quality of management should not, however, be influenced by the non-profit character of the activity. It is observable that the lines between the two sectors are becoming less and less evident with the closer cooperation between the public and the private sector (Kovács, 2003b).

The budgetary sector also provides services, however the beneficiaries of these services do not have an individual decision whether they need the service or which level of service they need, and do not pay the service provider directly for the service rendered to them (Pete, 1997.).

Although, per definition the budget deals with the future, annual budget tends to disregard the more distant future. Realizing this, many countries have established a long term and a medium term planning framework as the basis for their annual budgetary cycle.

The process of budgeting is a cyclical decision making process. There is a need to analyze systematically resources allocated earlier, and their impact on objectives to be achieved, and at the same time to study what future commitments should be made in order to achieve the objectives of the organization. An appropriately established budgetary process can greatly contribute to better efficiency, effectiveness and accountability (Herbert et al, 1987.).

The allocation of resources in public sector financing is made all the more difficult by the fact, that many look upon the budget as freely available money that anyone can tap into, and government cycles stand in the way of strategic management, while as a result of the asymmetric information, we can observe the emergence of the principal-agent problem.

Nyikos finds it necessary to rethink the tasks and subsystems of the public sector, and to institute a reform of the information, planning and decision-making system. He has the opinion that law should also set forth, what the executive branch of power has to report on at the end of budget cycle, and the functional classification system needs to be developed further accordingly (Nyikos, 2002.).

4.2. The Hungarian regulation of budgetary management²

Budgetary organizations work according to an annual budget, and prepare their annual report, which has to be in relation with their tasks. One of the most emphasized and politically scrutinized areas of budgetary management is planning. Tasks, related to planning the budget can be divided into planning professional tasks and calculation. Professional tasks related to budgetary planning comprise:

- specifying planning requirements, guidelines and methodology and enforce them;
- specifying professional tasks in line with budget estimations and professional requirements;
- specifying the personal, material, organizational requirements of professional tasks.

² Based on the Act on Public Finances (Act XXXVIII. of 1992) and on the Government Decree on Budgetary Management (217/1998. (XII. 30.)).

The calculation extends to:

- establishment of budgetary revenue and expenditure estimations;
- establishment of a financing plan for the budget;
- the specification of the number of personnel;
- the development of indicators related to tasks (task indicators) and budgetary indicators related to financing the tasks (normative contribution);

The supervising organization will:

- define the general planning requirements, methodology and guidelines that are to be used compulsorily;
- provide information on estimation of expenditure, revenue and number of personnel available for the subordinate organization;
- define the changes in the implementation of tasks in order to increase economy;
- decide on the reallocation of tasks and funds between subordinate budgetary organizations;
- study the available organizational, material and human resources for the implementation of professional concepts, while also decide on possible increase or decrease of such resources;
- on the basis of professional priorities plan the allocation of expected surplus revenues that are the result of improvement in efficiency and economy.

I am on the opinion that from the list above the two areas most fit for change are the central management of revenues, expenditures and number of personnel, and the central decisions on necessary steps to improve efficiency and economy. Instead of the top-down planning of the budget, it would be better to define tasks top-down

and then calculate the required expenditure and the required number of personnel for the given set of tasks at the organizational level.

Measures to increase economy again are quite difficult to define centrally, especially in the case of the Hungarian military, which is a 40,000 persons strong organization. The management of an organization – given certain incentives – would most probably be in a better position to articulate proposals to increase economy and efficiency. This, of course, would not mean that certain solutions used by an organization successfully could not be a benchmark for the others.

The budget of an organization incorporates expenditures and revenues in detail, broken down by economic categories, by tasks, sets forth the number of personnel, their composition and their wages, sets forth performance indicators, and gives detailed explanation for expenditures and revenues.

Table 3 shows the structure of a budget defined by the Act on Public Finances:

Expenditures	Revenues
Operational budget	Operational budget
- wages and allowances	
- social security	
- material expenditure	
- financial subsidies for beneficiaries	
- other operative expenditure	
- interest	
Capital budget	Capital budget
- investments at organizational level	
- renovation	
- other investments	
- investments at central level	
- housing subsidies	
- housing construction	
- development related investments outside of the public sector	
	Loans

Table 3: The main elements of a budget.

Legislation sets forth in detail the scopes of authority related to the management levels of the budgetary organizations. The top manager of a budgetary organization can in his own right reallocate funds within the approved budget within the operational and the capital budget, between the operational and the capital budget, and can increase or decrease the loans, but this latter cannot be aimed at increasing wages or decreasing funds for renovation.

During the course of the year, the head of the budgetary chapter (in most cases the minister) will ensure the efficient use of budgetary funds, number of personnel and state assets. The minister will exercise the right to reallocate funds and staff number figures within the budgetary chapter. However, it is thought-provoking how the leader of the chapter can actually enforce efficient management at the lowest

level, when the accounting information system, because of its cash based approach, is not even suitable to allocate expenditures to tasks, not to mention cost calculation.

The head of the budgetary organization is responsible for:

- the efficient management of the assets of the organization;
- carrying out the tasks specified in the charter of the organization according to legal requirements;
- ensuring efficiency and economy in the daily management of the given organization;
- providing complete and valid information on plans and on implementation;
- harmonizing management opportunities and obligations;
- ensuring adherence to accounting principles;
- and carrying out continuous monitoring activities, organizing internal audit and ensuring its efficient operation.

As we can see, rules and regulations set requirements for the leader of a budgetary organization, which they are incapable of delivering within the current conditions. It is impossible to control efficiency, because of the lack of capacities in accounting information systems explained above. It is difficult to ensure the harmony between opportunities and obligations at the organizational level, since the supervising organization defines expenditures, number of personnel and as the practice shows, the harmony with tasks does not always exist.

The budgetary organization is obliged to operate within the framework defined in the budget, including the budget appropriations and the number of personnel. The budgetary organization cannot amend this framework, unless it is set forth in law, or the supervising organization gives the authority to do so in a regulated way. These amendments cannot result in an increase of the budgetary requests either in the given

budgetary year or in the following years. An independent budgetary organization has the right to increase its budget total only from funds remaining from previous years, reserves of entrepreneurial activities or surplus revenues.

The budgetary organization has the right to manage independently the approved number of personnel and the personnel related funds. Salaries comprise regular and non-regular payments and payments to outside personnel. The sum appropriated to payment of bonus is planned within non-regular payments, and this can be only up to 8 per cent of regular salaries.

Savings on regular salaries can be used during the course of the year to pay bonus to the employees, but this payment can only be up to 10 per cent of regular salaries. Above this level bonus can only be paid in the case of outstanding performance, which is an interesting wording of the Hungarian regulation, since bonus per definition is supposed to be paid to acknowledge outstanding performance.

If a budgetary organization decreases the number of personnel during the year, funds remaining because of this can also be paid during the budgetary year and the following year as bonus. This however cannot exceed 50 per cent of the funds originally meant for regular wages.

Funds remaining from a previous year, can only be used after the amendment of the budgetary plan. The centrally managed funds can be used with unchanged purpose, mainly to settle accounts generated during the previous year but not paid yet.

Funds remaining from a previous year as a saving on salaries can be used either for salaries or for covering other expenses, but funds saved on other budgetary items cannot be used for paying salaries.

If the unfavorable conditions in the economy or the changes in state commitments require it:

- the government has the right to rearrange the funds remaining from previous years;
- the finance minister is entitled to withdraw these savings from the different chapters, if it is not bound with commitments.

This rule is an obstacle of using funds saved in previous year in an efficient way, since the budgetary chapters try to prevent the finance minister from withdrawing their savings, and they undertake commitments in haste, regardless of professional priorities.

4.3. Accounting in the public sector

The system of accounting in public sector is different from business accounting. Depending on when events appear in bookkeeping, we distinguish between three types of accounting systems:

1. Cash based accounting: transactions appear in the books at the same time as the flow of cash, i.e. we account for the amount of money paid or received, at the time the payment took place.
2. Accruals accounting: the objective is to actually shed light on the cost and expenses related to a given activity or product. This sort of accounting only acknowledges transactions, which were effectuated in a given period, regardless of when the transfer of fund took place. Financially unsettled items appear in the books in the form of receivables and liabilities. The price of real estate and other fixed assets are not debited for the period, when the purchase took place, but are depreciated annually, meaning that the depreciation is a cost factor.

3. Modified cash based accounting: cash based reports are corrected from time to time with data based on accruals accounting.

Until the 1950s in Hungary, budgetary institutions exclusively used single entry bookkeeping based on cash flow, in order to register their expenditures and revenues. There were separate records kept on assets in quantity and about liabilities, which were not linked to general ledger, thus they were not part of a closed system.

The disadvantage of this bookkeeping system was that the information required for the budgetary report, could not be gained from accounting data. In order to protect state assets, as of 1 January 1956 double entry bookkeeping was mandatorily introduced for central budgetary institutions, where reports on assets and cash transactions were prepared in a closed system.

The accounting of the different budgetary institutions showed a very mixed picture even afterwards, because smaller municipalities still used single entry bookkeeping, whereas the majority of larger institutions used double entry bookkeeping (Harangozó, 1977.). In the sphere of defense, recording assets was even more difficult, because analytic records were not unified either in content or in form (Korsós, 1982, Kőhidi, 1982.).

Nowadays, the special rules on reporting of the budgetary organizations are set forth in a government directive, which orders the use of modified cash based double bookkeeping. The current state accounting system faces several problems:

- the data of the Budgetary Act do not meet the information requirement of decision makers;
- part of the data is redundant, not transparent and reliability is not certain;
- the classification system is underdeveloped, no solutions has been found to set forth performance requirements and to measure performance;

- current and capital transactions are mixed;
- the system of bookkeeping serves unclear accounting objectives;
- there is no relationship between planning and implementation;
- the recording of state assets is unreliable, and principles to value these assets

are missing e.g. in the case of military assets (Nyikos, 2001.).

However, legal steps to regulate public sector accounting in law have not been taken yet, because there is no urgent circumstance in the public sector, which would made it unavoidable. The first Hungarian Act on Public Sector Accounting appeared in 1897. Until the mid 19th century, the notion of public sector accounting also comprised regulations for Parliamentary approval and budgetary execution. The fact, that approval and execution are regulated separately would not cause a problem itself, but the two systems have to be compatible with one another.

Public sector accounting also has to comply with two main requirements: it has to provide comprehensive data for the legislative power to show that public funds are spent on the approved purposes and at the same time, it has to support the decision of local executives in order to provide for efficient management. The room for movement granted management cannot curtail Parliamentary control (Kassó, 2001.).

Accounting in its current form is very lavishing; the two most important users of information, the political decision makers and the local executives do not receive suitable information. The excessive amount of information is difficult to comprehend, the activities of the executive branch are not transparent enough and local managers do not face the financial and material consequences of their decisions.

The cost of the use of assets, i.e. depreciation, is not included among the cost factors of public services. In the case of companies, depreciation is a cost factor thus,

there is no need to have special reserves established for replacing assets. Budgetary organizations cannot do this, since if they wish to use a given amount of funds for investment, then that has to be approved in the annual state budget, and in the budget provision of the organization (Kállainé, 1976.).

According to Illés, accumulation of assets in the market sector is determined by the rate on assets, while in the public sector, the capital requirement is derived from the capacity requirement necessary to meet the demand of the service (Illés, 2000.). It also has to be added, that the demand for the service in itself is not enough, there is a need for also a political consensus on the level of service to be provided.

The current Hungarian public sector accounting system already comprises the basis of controlling, the monitoring system, which means that plans and actual data are reported in the same structure. Another important pillar of controlling system, feedback, is however missing. There is no thorough analysis of discrepancies and thus, the necessary measures are not taken to improve management.

One of the big deficiencies of the cash based accounting approach is said to be the end of the year spending, which international literature calls the hockey-stick effect (it means that the straight line of spending during the year turns into a curve upward during the last months of the year).

Spending by budgetary organizations according to the cash flow plans is also made difficult by the lengthy public procurement processes, because of which actual financial transactions are not effectuated during the same year when the procurement process started.

Many countries have realized that it is more reasonable to add a few percent of flexibility to the system, i.e. a certain percentage of a given year's budget can be

rescheduled for the following year. Thus, there is no need for end of the year, in most cases professionally unjustified spending.

It has also been made possible in Hungary to use funds from the given budgetary year to pay for contracts that are performed by 30 June the following year. In the case of defense organizations, because of the specific character of defense markets, this deadline has been extended to 31 December the following year.

The cash based approach also influences the planning system, since the managers have narrow window of opportunity to intervene as to when a given invoice should arrive. Thus, the budget is not substantiated in detail, it only outlines requirements in general, and the actual allocation takes place during implementation.

The above-mentioned deficiencies and the unfavorable impact of cash based approach on budgetary institutions all points to one direction: the efficient and effective management of budgetary organizations requires the transition to accruals accounting.

4.3.1. Accruals and Cash Based Accounting

Worldwide, one of the cornerstones of the public administration reform is the move from cash based accounting to accruals accounting. A few things need to be emphasized in this respect:

1. The result of these two approaches should be the same on the long term, and only the result of a given period should be different.
2. The accruals accounting provides information earlier about the cost related to a given activity or product, because there is no need to wait for the financial settlement, it is the physical delivery that is important.

3. The difference between accumulated accruals data and the data of cash based accounting can be calculated from the amount of receivables and liabilities.

4. In the case of accruals approach, it is possible to interpret unit cost. In the case of cash based approach, the time difference between actual performance and financial settlement distorts the picture.

Illés defines two types of accounting systems, one based on natural processes, the other based on financial processes. The latter one looks upon expenditure as being the cost and does not take into account financially unsettled performance, or purchased, but unused resources. To compare the two accounting systems, Illés studies the emergence of resources in real and value processes, where stock data means the accumulation of resources, and flow data show the use of resources (Illés, 2002.).

It is not possible to separate setting requirements against accounting from the requirements of management. Traditional budgetary systems tend to focus on input, and expenditure of inputs for which the cash based approach is perfectly suitable. The cash based approach allows a scrutiny of government spending and the implementation of Budgetary Act, and also allows the in-year monitoring of the implementation of the budget.

During the recent decade, with the rising need for efficiency and effectiveness, more and more countries have decided to shift to accruals accounting, which does not only recognize items that are related to transfer of funds, but allows the calculations of the total cost of public services.

Accruals accounting improves resource allocation, makes it possible to justify decision on investment, and by using accrued and deferred assets and liabilities also

makes it possible to show future liabilities. It provides for a stricter scrutiny, because the executive does not only report on the movement of funds, but also on the status of assets they manage. It improves the transparency of government activities, because it shows total cost, and provides a more comprehensive picture on the impact of government on the economy (Diamond, 2002.)

The most important benefits of this type of accounting according to Diamond is that it helps promote a better analysis of the performance of programs by showing their total costs; it provides a more realistic assessment of the financial position of the administration through total resources and liabilities; provides wider information on decision-making, thus, supports a more efficient use of existing resources; improves responsibility of managers for their performance, and because of transparency it is an incentive for better performance.

This transition can only be however, the part of a comprehensive budgetary reform. Accounting should serve and not lead this reform, i.e. the budgetary system should define the accounting system of the public sector organizations. Since the accruals approach can also show the transactions of funds, the cash flow statements of companies serve this purpose, the two accounting approaches should not be handled as two separate systems excluding one another.

The issue of the transition from the cash based approach to the accruals approach could be articulated by asking why there is a need for more information that cannot be provided by the cash based but only by the accruals approach (Diamond, 2002.). According to Redburn, it is impossible to draw a distinct line to say that on which areas cash based accounting should be used and where the accruals approach is necessary (Redburn, 1993.).

In order to be able to concentrate from the input side to the output side, we need an accounting system which is capable of pairing expenditure to performance, and is capable of managing information on performance as comprehensively, and as credibly as it can handle financial information.

The first steps of the transition to accruals approach were taken in New Zealand and Australia, but a number of European countries also have some experience on this field. About half of the OECD countries use to some extent accruals approach, however, there is great variety as to the extent it was introduced. Some uses it in the financial report of ministries and agencies, a few use it to prepare the report of the public administration, while others use it to prepare the budget, as well (OECD, 2002a).

In Sweden for example, they introduced the system gradually, working from bottom towards the top, from agencies to the state budget, and the Netherlands also chose a similar method. In the United Kingdom, the central government has been using accruals accounting since 2000/01. France, has only shifted at the local level, while Spain still uses a dual system (OECD, 2002b).

For the time being, it is only New Zealand and Australia who use the accruals approach both for their reports and their budget preparation, but of course this cannot happen without preparing reports on movements of funds (Churchill, 1992.). The UK, Canada and France plan to roll out the use of accruals approach to the budget in the near future. The example of Australia and New Zealand shows, that the use of the accruals approach in preparing the budget serves to better identify liabilities that are not funded, provide for better asset management, and more efficient allocation of resources (OECD, 2002b).

Following our accession to the European Union, budgetary institutions participating in the distribution of EU funds, have an obligation to prepare reports on their performance, using accruals accounting. The accounting information system of the public sector continues to be a modified cash based system, thus, the government decree on the reporting of the budgetary organizations allows the existence of two separate bookkeeping, with the obligation of regular harmonization of the two (Lilliné, 2004.).

On the basis of domestic regulation budgetary institutions are only obliged to prepare a regulation for unit cost calculation, if they are involved in regular sales of products or services, or if they are involved in any entrepreneurial activities to identify the cost. In the guidelines about the unit cost calculation, it is the actual expenditure that is regarded as the cost, however these do not cover the conversion of the expenditure of the cash based system to cost of the accruals accounting (Juhász-Kolozsvári, 2003.).

4.3.2. The macroeconomic basis of the choice of public sector accounting

In the public sector, the reason for using cash based accounting is that state debt was looked upon as the main indicator for budgetary sustainability and intergenerational equity. In the period after the World War II, Keynesian budgetary policy reinforced the basis for this choice, although we could find dual budgets in many countries, which were divided between capital and current operations. The structural deficit and the public debt problems of the majority of OECD countries, however shook the confidence in budgetary fine-tuning, thus the emphasis from the 1990s shifted towards a mid-term budgetary policy (Robinson, 2002.).

Public debt is an unjust obligation deferred to future generations. Many say, that accruals accounting can provide a solutions to that problem, i.e. if the accruals balance is zero, then taxpayers' collected money will just cover the total cost of public services provided during the budgetary year.

On the capital side, accruals accounting acknowledges depreciation as a cost, and not capital expenditure. In terms of incomes, the revenues generated from the sale of capital assets are not recognized in this system, contrary to the cash based approach. Thus, the balance in the cash based system is more favorable if the government does not maintain or does not replace depreciated infrastructure. Accruals accounting has a much wider view, thus, can serve much longer-term objectives.

Cash based accounting does not take into account the future impacts of government policy and does not calculate with the total economic cost. The accounting used in the public sector demonstrates investments in gross terms, which includes both the replacement of depreciated assets and additional investments.

The accruals approach already accounts for consequences when they arise, which is an important factor when assessing performance. Another benefit of taking into account total costs can be that it is easier to compare the efficiency and the performance of the public services provider with a private sector organization providing the same or similar services (McGeough, 1997.).

Javier Salinas looks upon accruals accounting as a tool to stabilize European public finances. It is also in favor of accruals accounting that in the European Union, a basic precondition of the European Monetary Union is the adherence to the budgetary objectives, which requires active measures to be taken by member states. There should be tangible measures taken to reduce certain expenditures or programs,

or even to cancel them, and it is important to change the budgetary processes in such a way that serves to improve the performance of public service programs and the distribution of resources (Salinas, 2002). Most of the countries consider accruals accounting indispensable for fulfilling the latter requirement.

4.4. Domestic attempt of transition to accruals accounting

Accruals based management and accounting of the public sector is not a novelty in Hungary. Act II of 1979. on Public Finances and the Government Decree on its implementation also attempted this (Act on Public Finances 1979, Government Decree on Implementing the Act on Public Finances).

Double-entry bookkeeping introduced in the 1950s at central budgetary organizations solved many problems that had existed earlier, however it was not an original system tailored to the specific characteristics of the budgetary management, but instead an adaptation of business accounting. There was a constant debate on the concurrent existence of a cash based and accruals approach. Different authors argued with one or the other, many however also accepted the justification for both approaches and urged to keep both of them.

Sárdi was on the opinion, that until the contradiction existing in this dual system is not dissolved, there is no chance to expect more results than to register economic events. He had the idea of providing a larger scope to the cost calculation instead of registering expenditures, because a mechanism that disregards cost management cannot increase the efficiency of using available assets (Sárdi, 1979.).

In the market sector, accruals accounting registers the processes of money-product-money cycles. In budgetary management, such an interpretation can only be used in a very narrow field, since although money becomes service (product), but normally the beneficiaries of the service are not obliged to pay for the service. Thus,

the budgetary system has to serve different requirements: it has to serve the enforcement of the governmental will with the tools of planning, revision, approval, modification, financing of budgetary appropriations.

Tucsni despite this was on the opinion, that double-entry bookkeeping is not in contradiction with the essence of budgetary management. Its use is required, because it is one single, comprehensive and closed system which registers economic events, thus helps to protect public assets and it is such a comprehensive, unified and complete system, which paves the way for substantial analysis (Tucsni, 1979.).

Kállainé also reasoned for the accruals approach and urged the establishment of such an information system, which besides well summarizing financial settlement, also helps to support financial decisions and the forecast of future events (Kállainé, 1976.).

The reform of the public sector accounting was driven by the dissolution of the contradiction that accruals double-entry bookkeeping is trying to keep track of the processes of an expenditure based planning, management and information system, and to justify the expenditure based decisions with accruals information.

Most of the authors agreed, that the planning of expenditures had to remain in place, since this is a key element of the planning and implementation of the state budget. The debate was only on to what depth and at what level the planning of expenditures and revenues should be required (Dudásné-Harangozó, 1979). According to most of the authors, expenditures and revenues can only be a category used at organizational level, since it can be planned only at this level with sufficient precision.

In order to decide on accounting system, there has to be a clear-cut separation between financing the budgetary organizations and their professional performance.

In Tucsni's interpretation, budgetary organizations carry out general and special management tasks. General tasks can be considered as being the collection of revenues and spending the funds i.e. allocation of financial resources, whereas the special tasks are basically the given professional area of expertise, i.e. providing services from available public funds. According to his opinion, the choice between accruals and cash based approach provides an answer to the question whether we want the budgetary organizations to better perform in their general or in their special tasks.

According to Tucsni, the accounting system also has to be influenced by the position, the organization occupies in the organizational hierarchy. The supervising organizations mainly carry out general tasks, they transfer the necessary funds to their subordinated organizations, and also collect revenues. Tucsni was on the opinion, that it is not necessary to have accruals accounting in order to register available funds. It has to be noted however, that the allocation of funds is not a process for its own purpose, supervising organizations have to allocate funds according to activities and performance of these activities.

Budgetary organizations conducting operative tasks will record the use of budgetary resources in a parallel way both in the cash based and accruals approach. Revenues and expenditures should be broken down by the predefined structure of budget, whereas costs have to be presented by cost category and by task. With this solution, the author is on the opinion, that the implementation of the budget can be assessed, and at the same time, accruals based analysis is also catered for (Tucsni, 1979.).

According to Sárdi, when talking about the accountability of budgetary organizations at lower level in the hierarchy, supervising organizations focus on cash

only. However, the activity of budgetary institutions can better be described in accruals approach, thus there is a need for cost management (Sárdi, 1979.).

Budgetary planning, accounting and reporting have at their focus point the planning of expenditure broken down by tasks. The expenditure on a given task can only be ascertained with a high level of imprecision, thus it is impossible to use cash based figures to prepare a serious analysis, if several tasks are to be carried out (Dudásné-Harangozó, 1979.). In the case of the procurement of stocks for instance, it cannot be decided which cost center is to bear the burden of the expenditure. In the majority of the cases, such expenses were allocated to the highest volume task, and then corrected later on. (Kállainé, 1976.).

The most preferred version thus, could be if cash-flow (expenditures and revenues) would be planned at organizational level, whereas in the case of tasks there would be cost planning, and the reporting would be executed accordingly. Taking into account the development in information technology in the recent past, nowadays, there would be an opportunity to establish an information system, where having registered the core data once, the system would be capable of generating reports for both accruals accounting and cash based accounting.

According to many, it is not important to monitor costs, because expenditure and cost differ very little, and on a longer term this difference is actually nullifying. This is true in the case when the activity is constant and do not use much material, but in the rest of the cases there could be a more significant difference. Thus, the activity of a budgetary organization can only be assessed correctly on the basis of accruals approach (Dudás-Harangozó, 1979.).

5. International experiences of public sector reforms

In this chapter I would like to identify organizational and regulatory changes that have come about as a result of reforms carried out internationally in public finances, discussing in detail the experiences of the United States of America and the United Kingdom. The purpose of this chapter is to highlight the necessary preconditions of performance management and not to propose a system that should be implemented in Hungary. This latter would require a more comprehensive analysis, taking into account the size of the organization, cultural differences and many other characteristics.

5.1. Comparative analysis of international public sector reforms

The New Public Management aims to improve the efficiency of public administration, for which according to Hood the following are required (Hood, 1991.):

- public sector be managed by professional managers;
- tangible performance norms be defined and implementation measured;
- there be a greater emphasis on the outcome of the activity;
- the size of the organizational units should decrease;
- there should be a move towards competition;
- the introduction of methods used successfully in the private sector should be encouraged;
- and there should be incentive for an orderly and cost conscious use of resources.

The results of New Public Management reforms was reviewed in an OECD study with the participation of 10 countries: Australia, Canada, Denmark, Finland, France, the Netherlands, New Zealand, Sweden, United Kingdom, United States (OECD, 1997.).

The study reviews the introduction of performance management from four different aspects: the objectives and focus, the approach used, institutional arrangements, and performance information system.

5.1.1. The objective of the reform and the approach used

In terms of objectives, the study of 10 countries identified 3 main objectives for the introduction of performance management, which every country took into account with different emphasis³. The improvement of management and internal processes gained emphasis in Australia, Denmark, Finland, the Netherlands, Sweden and the United States. Accountability and control was at the focus point in France, New Zealand and the United Kingdom. The process was motivated by potential savings in Canada, but Finland, New Zealand, the United Kingdom and the US also gave significant emphasis to this.

In terms of approach, authors have separated the top-down or bottom-up version, the comprehensive or incremental introduction, and de facto or de jure introduction, which I would not discuss in detail in this thesis.

³ Zupkó gives a detailed analysis of the international public sector reforms, and also carried out an empirical research with the participation of Hungarian local governments (Zupkó, 2001; Zupkó 2002.).

5.1.2. The impact of the reforms on the institutional arrangements

The organizational structure also underwent changes with the view to improving performance and there was an internal pressure on managers and external pressure on the organization itself. The administrative character, where adherence to predefined rules was the main objective, was shifted in the direction of making and letting managers manage, while bureaucratic methods, where public service is provided in a monopol situation shifted towards market type solutions.

It is necessary to study organizational changes caused by the reforms in two dimensions, one of which is the centralization of the organizational structure. In the centralized approach, the organizational hierarchy is kept between the central organizations and the periphery, and there is a strong control over resources (finances and personnel). The decentralized model gives a greater window of opportunity for the organizations in allocating resources and also prefers the establishment of smaller organizations carrying out homogenous activities.

The other dimension is the implementation of policies and programs. The model urging for consolidation integrates programs during the course of development, implementation and assessment. The model of decoupling and disconnecting gives a larger independence to the organizations for the achievement of their professional objectives. On the basis of these two dimensions, the following combinations can be identified:

1. Centralization and consolidation. The solution of traditional bureaucracies where there is a strong control over resources and the implementation of professional tasks managed centrally on the basis of an organizational hierarchy.
2. Decentralization and consolidation. Autonomous organizations implement their programs on the basis of central guidelines, coordinate programs

covering several organizations, and the lower levels of organization adjust to higher level programs.

3. Centralization and decoupling. Resource management is centralized, but the integration of programs is loose, organizations enjoy independence in the implementation of their professional programs.

4. Decentralization and decoupling. Autonomous organizations carry out homogenous activities, there are no overarching programs for different organizations, the definition, introduction and assessment of programs is not linked in practice.

The countries studied showed the largest shift towards decentralization, but have not yet made comprehensive attempt to implement policies and programs in an autonomous way.

5.1.3. Performance Information System

One of the most important achievements of public sector reforms is the Performance Information System, which contains:

- performance measurement system (measuring activities, outputs, outcomes, quality etc.),
- an adjusted financial management cycle (budgeting, accounting, auditing and evaluation),
- a system of reporting and the status of performance information (public accessibility of annual reports, budgetary reports, performance standards)
- the mechanism of using performance related information (performance budgeting, performance related wages),
- result oriented management support techniques (performance agreements, risk management, benchmarking).

The content of the performance information system is dependent on the philosophy of the public sector reform. Certain countries have concentrated on organizational outputs, such as New Zealand, while others on outcomes, Australia and the US, or financial results and the quality of service, or customer satisfaction, measured with the help of a questionnaire, such as in Denmark. In the Danish system, beneficiaries of the service and potential consumers also play the role in measuring and monitoring the quality of service. Surveys were taken at two levels, on the one hand at ministry or agency level, while also centrally covering different areas. Surveying consumers is used as a way of measuring performance in Finland. At the beginning, it was conducted in an ad hoc way, but by today, several ministries have established a regular way of using the feedback from consumers by sending out questionnaires to them annually.

Hazafi also calls attention to the integration professional and financial performance, since cheap public service is not necessarily positive if it is accompanied by the dissatisfaction of consumers. Reversing this, the author is on the opinion, that cost is not so important, if the consumer is satisfied, because then the public service can be considered successful (Hazafi, 1995.). I disagree on the latter, because in my opinion both dimensions are equally important, since being aware of the costs, it is not at all sure, that the consumers would also be similarly satisfied.

When assessing the Performance Information System, it is important to see to what extent performance indicators cover the activities and expenditures of the organization. The experiences of the studied countries have shown, that there are more indicators related to activities than to outputs, and there are more indicators measuring output than outcome. The author cites the Dutch example, where over the course of two years justification of the budget by performance indicators grew from

53 per cent to 66 per cent. At the level of agencies, however, this ratio was between 4 to 80 per cent, which means that the different areas in the public sector use the system with different intensity (OECD, 1997.).

For market organizations activity based costing is used widely as an important management tool to measure performance. The essence of this is that indirect costs be allocated in such way that will realistically reflect the role of different activities in manufacturing the product. Indirect costs can only be allocated to products to the extent that the activities they cover participate in the manufacturing of the product or the rendering of a given service.

The two most important tasks of activity based costing is to plan the system that allocates costs in that way, and to define indicators that will characterize the contribution of a given activity to manufacture the product or render the service. Activity based costing is not only a more precise calculation⁴ than the traditional one, but also a new management approach which analyzes activities according to the role they play in the manufacturing of a product⁵. Its aim is to identify activities not generating added value as comprehensively as possible, and to reduce costs (Koltai-Tamássy, 1996.).

When establishing activity based costing system, the optimum (shown in Figure 2) is defined at the minimum of the total cost, which is the sum of the cost of generating information and the cost resulting from imprecision of management decision because of the lack of information.

⁴ Lázár prepared a comparative analysis on the German and Anglo-Saxon traditional cost calculation systems (Lázár, 2002.).

⁵ The cost calculation system of the MoD UK is shown in Annex 1.

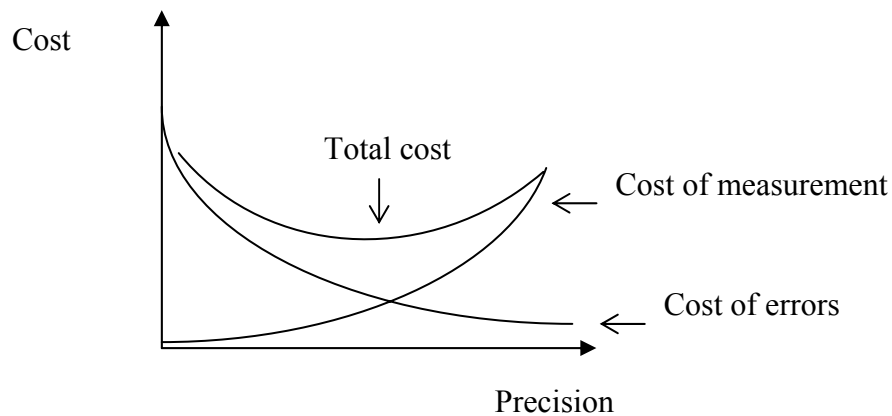


Figure2: The equilibrium between the cost of imprecision and the cost of measurement
Source: Kaplan-Atkinson, 2003.

Before introducing the method, one also has to study whether activity based costing can provide more precise information on the basis of corporate processes and organizational structure than the traditional method, and to what extent cost information determine management decisions (Koltai-Sebestyén, 2003.).

5.2. The American experiences of public sector reform

5.2.1. Legislative background

In the United States the General Accounting Office, the institution of Congress defining the basic principles of accounting and auditing, issued the Standards for Audit of Governmental Organizations, Programs and Functions, according to which:

Fundamental principle of democratic societies is that government and their agencies handling public funds and having the right to decide on their use have complete responsibility to give account of their activities. This responsibility characterizes the governmental processes, even if legislation sets this forth in an implicit way. This accountability of government does not only need to cover public funds, but also has to cover the way public funds were used, and its implication (Herbert at al, 1988.).

In 1993 acting upon the initiative of Senator William Roth, the American legislative issued the Government Performance and Results Act. Many consider the

Planning, Programming and Budgeting System of the 1960s, the Management by Objectives of the 1970s and the Zero-Base Budgeting as the predecessors of the GPRA.

According to rules set forth by the GPRA, every department and public agencies has to prepare a strategic plan, on which it bases its planned performance and defines performance goals for the given period. On the basis of these departmental level plans, the Office of Management and Budget prepares a comprehensive plan of the government, in which the budget of the given agency corresponds with the performance to be achieved. During the course of implementation the managers have greater flexibility by allowing the waiver of various administrative restraints, however, in return there is a much stronger accountability for the performance of programs and operations. Every ministry and public agency prepares an annual performance report, in which it compares actual performance with the goals set forth in the plan.

The ministries need to prepare a strategic plan covering 6 years and revised at least every 3 years that contains a comprehensive mission statement, sets forth general goals and objectives, and the way objectives are to be achieved. It also identifies external factors affecting the achievement of goals, the method that is to be used for implementation and the way performance assessment is to be carried out.

The annual performance plan has to set forth:

- at least one performance goal⁶ for every program and the area that the given organization is involved in,
- performance indicators for output and outcome,
- the description of the tools used to validate and verify measured values,

⁶ A performance goal is the target level of performance expressed as a tangible, measurable objective (quantitative standard, value or rate) against which actual performance will be assessed.

- a short description of operating processes and skills, technology, human resource, information etc. required for meeting the performance goals,
- a description of the waivers of administrative rules to increase the flexibility of management.

The goals of the annual performance plan are required to be linked to the outcomes that the organization wants to achieve, be objective, and be articulated in a quantifiable, measurable form (OECD, 2002d).

The annual performance report contains a comparison of planned and actual performance and also an explanation if the performance planned was not achieved. In the case of a deviation between planned and actual data, it also has to describe the plan and the schedule how the organization wishes to achieve the missed performance goal. If the objective in its original form is impractical or infeasible, there also has to be proposals made for future modification or cancellation.

The annual performance report summarizes the program evaluations conducted during the year, shows the impact of the waivers of administrative rules and other obligations on achieving performance goals.

The GPRA thus, builds on three main elements: strategic planning; performance measurement including the planning, measuring and reporting the performance; and the greater flexibility of managers in return for greater accountability for results (OECD, 1997.).

5.2.2. Steps of introduction

The General Accounting Office studied the experiences of countries leading in performance management of the public sector and on the basis of this identified three steps necessary for implementing performance management. For every step they also articulated the practice required which is set forth in Figure 3.

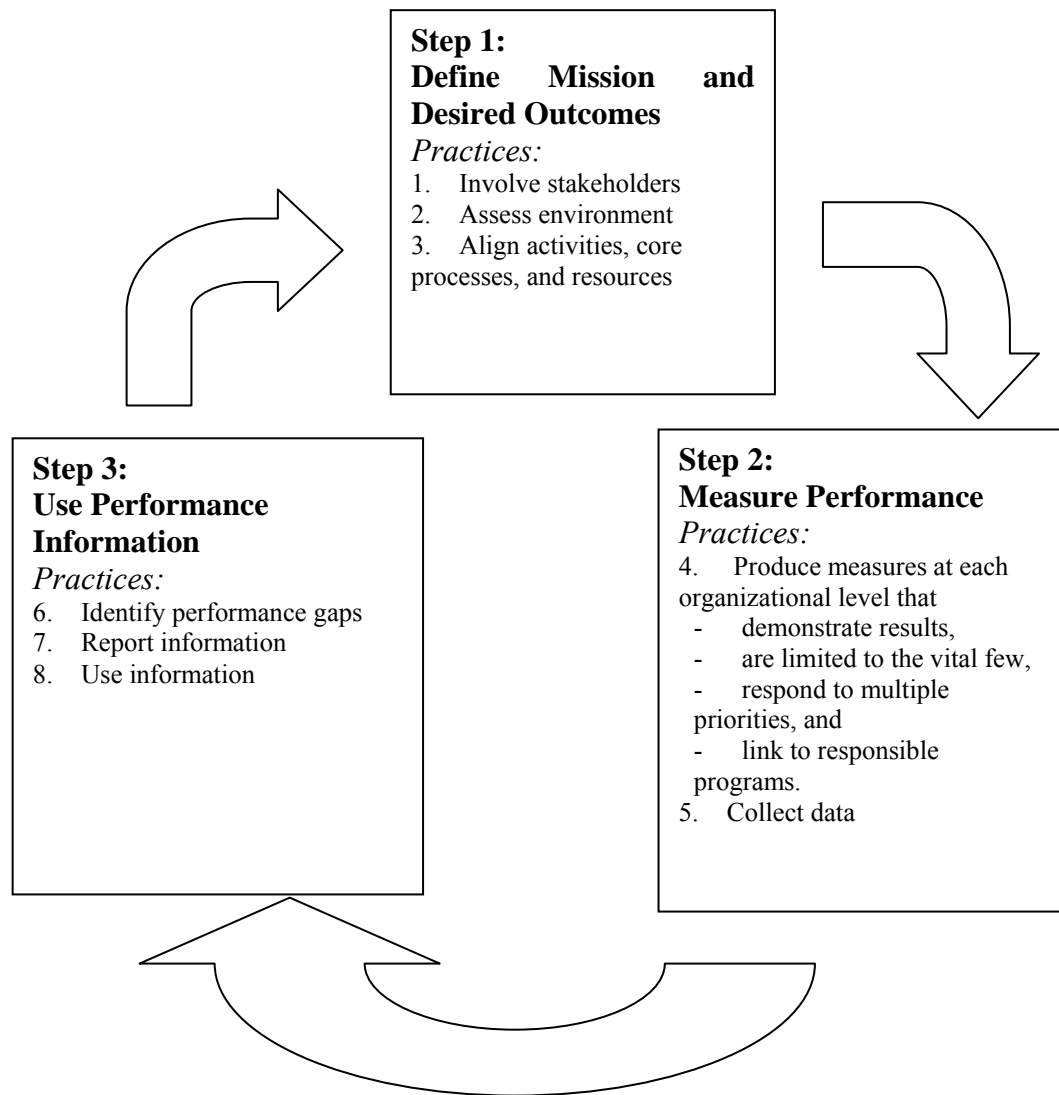


Figure 3: Steps of introducing performance management in the USA.
Source: GAO, 1996.

The strategic plan is the starting point for performance management. The strategic plan i.e. the given document is actually issued at the required time, however is a much less important part of the planning process than the significance of the preparation of this document. Strategic planning cannot be looked upon as a static, activity, but instead should be considered as a dynamic, inclusive process.

When articulating the mission, it is important to place emphasis on involving the relevant stakeholders, since during the measurement of performance, their

opinion is also to be taken into account, when studying the success of a program. On the other hand, if the stakeholders already participate in defining the mission, they will better understand the process aimed at establishing a balance between demands and scarce resources.

Osborne and Gaebler studying government approaches have emphasized that the mission oriented government is more efficient, successful, innovative and flexible than a government driven by predefined rules, and the working moral of the staff is also better (Osborne-Gaebler, 1994.).

Organizations also have to study and understand how processes and activities contribute to outcomes and the fulfillment of a mission. Most of the agencies have realized that the organizational structure is obsolete and does not meet the requirements of the modern times. More emphasis needs to be based on harmonizing performance expectations and financing levels, on human resource management and on information management.

Performance measurement makes it possible for organizations to study the progress they have made in achieving their objectives. A clear hierarchy of performance goals and indicators has to be established to let managers and employees see how their daily activity contributes to the achievement of the organization's strategic objectives.

Information on performance only has real value if actual performance is compared with the goals defined in the plan and thus, the management can decide on which areas to employ more resources in order to fulfill the mission (GAO, 1996.).

5.2.3. The experiences of performance management in the US Department of Defense

KIHAGYVA

The General Accounting Office studied the performance report of the US Department of Defense (DoD) for the year 2000, and uncovered numerous deficiencies. According to its performance plan, the DoD wished to achieve the following outcomes:

- to maintain the technological superiority of the US in the field of key military capabilities;
- to have sufficient number of well trained and highly motivated personnel;
- to continuously maintain the desired level of readiness;
- to have more efficient and cost effective infrastructure and operating procedures;
- to reduce the availability and the use of illegal drugs;
- to have fewer erroneous payments.

According to the findings of the study, it was not possible to define the progress the defense portfolio has made in achieving the required outcomes. One of the reasons for this was that the outcomes were too complex, interrelated and have required several years to achieve. Thus, it was difficult to define the path that leads to a gradual achievement of strategic objectives and outcomes.

According to the findings of the study, part of the performance indicators like the characterization of technological advantage by procurement cost did not provide a direct link to the required outcome. It was also difficult to comprehensively study performance, because in the majority of the areas, some performance indicators were met, while others were not, and some were reduced over the course of the year, which made it very difficult to assess overall progress. In the case of several discrepancies between the plan and actual data the DoD have not identified specific

steps and measures, which will help to contribute to the achievement of a given performance in the future.

Nowadays public administration organizations have to change their organizational culture in order to become more outcome oriented and consumer focused (GAO, 2001.). There is at least 5-7 years required for the full implementation of such measures and the radical change of organizational culture. According to American studies, taking into account the results of other Departments as well, it can be said that even this much time is not enough for a complete transition (OECD, 1999.).

5.3. The British experiences of the public sector reform

British reforms were launched in the 1960s and 1970s after the Fulton report, while in 1982 the Financial Management Initiative⁷ was published and it was in 1995 that a program aimed at the transition to Resource Accounting and Budgeting was started (Ashton at al, 1991.).

The significance of the transition to Resource Accounting and Budgeting lay in the fact, that in cash based accounting the cost of resources is registered for the period when the transfer of funds were made, while in the case of Resource Accounting and Budgeting cost of resources is registered for the period when the given resource was used in the interest of a given activity. A further advantage is that capital costs are also included in the calculations, so that depreciation carries a real meaning.

⁷ Financial Management Initiative was strongly criticized, because instead of managing people the emphasis was on information system and as they said, the government confused management with control.

In this system Departments have to submit the following reports to the Parliament:

- Summary Resource Outturn: a comparison of actual and planned resources, and the reconciliation of resources and funds.
- Operating Cost Statement: the use of resources, demonstration of cost by category.
- Balance Sheet: a demonstration of assets and liabilities.
- Cash-flow Statement: to demonstrate the source and the use of funds.
- A report on the use of resources according to tasks.

These documents are also supplemented by an unaudited analysis on the performance of the organization (Resource, 1999.).

The British have realized that in order to have an effective organization it is important that resource allocation reflect organizational objectives i.e. to finance activities which contribute to the achievement of a set of target. If the two systems are established independently and accountability and responsibility is not identical, this makes a rational distribution of funds impossible.

In the course of the public administration reform, they have also started to establish a controlling system. The following requirements were defined vis-à-vis a controlling system in the UK:

- it should be a clear system, accepted and understood by everyone equally;
- it should articulate specific, measurable, achievable, relevant and time related (SMART) objectives;
- based on performance indicators, which are linked to organizational objectives and are difficult to manipulate;
- the information substantiating these indicators be accurate and reliable;

- there should be positive feedback to the extent possible;
- it should be cost effective;
- it should result in an open process based on confidence;
- it should cover both resources and performance;
- it should provide feedback to the applicable levels;
- it should provide timely feedback;
- it should demonstrate to management the impact of their activity on output

(Resource, 1999.).

6. Measuring performance in public administration

The measurement of performance has come to the center of attention during the past few decades. Prior to that, the key issue in the public sector was the rule of law and adherence to regulations, which of course continues to be a requirement, however, there is also a new dimension that needs to be managed.

With the decreasing role of the state, and tax reductions to help international competitiveness – at the same time reducing budgetary resources – it has become more and more important to make public administration more efficient despite the lack of resources and by doing so reject criticism aimed at the quality of public services (Király, 1999.).

According to an OECD study of 2002, Hungary is still in the group of countries with high level of spending, where the ratio of public spending to the GDP is close to 50 percent (Cekota at al, 2002.). The desired reduction of this ratio would entail financial austerity measures or the introduction of efficient management methods.

This also contributed to the fact that regulation of public finances prescribes as of 2004 that the annual report also has to mention steps taken to improve cost efficiency and their short description should also be accompanied by a numerical analysis of their impact.

6.1. Basic definitions of performance management

Measurement of performance has a very wide literature⁸ even in the case of public administration, and although the most of the literary sources start with the

⁸ Dolgos provides a comprehensive analysis of the literature on measuring the performance of market organizations (Dolgos, 2000.).

difficulty of defining and measuring performance, finally, through certain compromises, they propose comprehensive performance assessment systems.

In this chapter I will only concentrate on measuring the performance of an organization, and I will not study the possibilities of measuring individual performance (Bóday, 1993, Linder, 1993, Krisztián, 2001, Vassné, 2001, Takács, 2002a, Takács, 2002b).

The Hungarian dictionary defines performance as the following: the measurable result of a given activity (Hungarian dictionary, 2003.). Performance, thus, is per definition related to some sort of activity, is the result of conscious work, and already its definition sets forth the requirement for measurability.

First of all let us study the subject of measurement i.e. what we wish to measure. In relation to performance, international literature separates the input-output-outcome triangle. Input is the resources used in the interest of a given activity, which is relatively well measurable. Although, in cash based accounting we record the items of cash transactions not the costs, and pairing them with a given activity entails problems.

Output is the result of an organizational activity, which shows what sort and what amount of activity was performed during a given period. The outcome shows what sort of objectives could the organization fulfill, what requirements of consumers were met and to what extent a value was generated.

Measurement of performance supposes that we are capable of somehow operationalize these three notions, and then compares them to each other. Depending on which items we compare, we can talk about economy, efficiency, effectiveness and value for money measurement⁹.

⁹ The National Audit Office of Denmark applies the term „cost effectiveness”, instead of „value for money” (Planning, 2004.).

The three Es, economy, efficiency and effectiveness are defined by Vígvári according to the following: economy means the minimalization of cost of resources used for a given activity. Efficiency shows the unit cost of the output of an activity, whereas effectiveness means the actual achievement of the objectives. The value for money principle says, that every expenditure is justified if it realizes actual or virtual added value (Vígvári, 2002.). According to the opinion of Király, the essence for value for money is that the results of internal activities of an organization do reach the segment of the external world that they wish to direct it to (Király, 1999.).

The government decree regulating the management in the public sector mentions in its amendment effective as of 1 January 2004 the requirements for the 3Es with the following definitions:

- economy: the optimalization of the cost of resources used for a given activity, while reaching an adequate level of quality.
- efficiency: the relationship between products, services and other results of a given activity, and the resources used for generating them.
- effectiveness: the value of realizing the objectives of a given activity, the relationship between the intended and the actual impact of that activity.

The decree also set forth that budgetary organizations are obliged to ensure economy, efficiency and effectiveness during the course of their activity (9. § (8)).

The National Audit Office of Denmark divided management activities into four areas and besides budgetary management it separated resource management, which aims to define the quantity and the composition of resources involved in the production process, activity management, which concentrates on defining output or activities, and performance management, which studies the achievement of objectives (Planning, 2004.). Figure 4 demonstrates that approach.

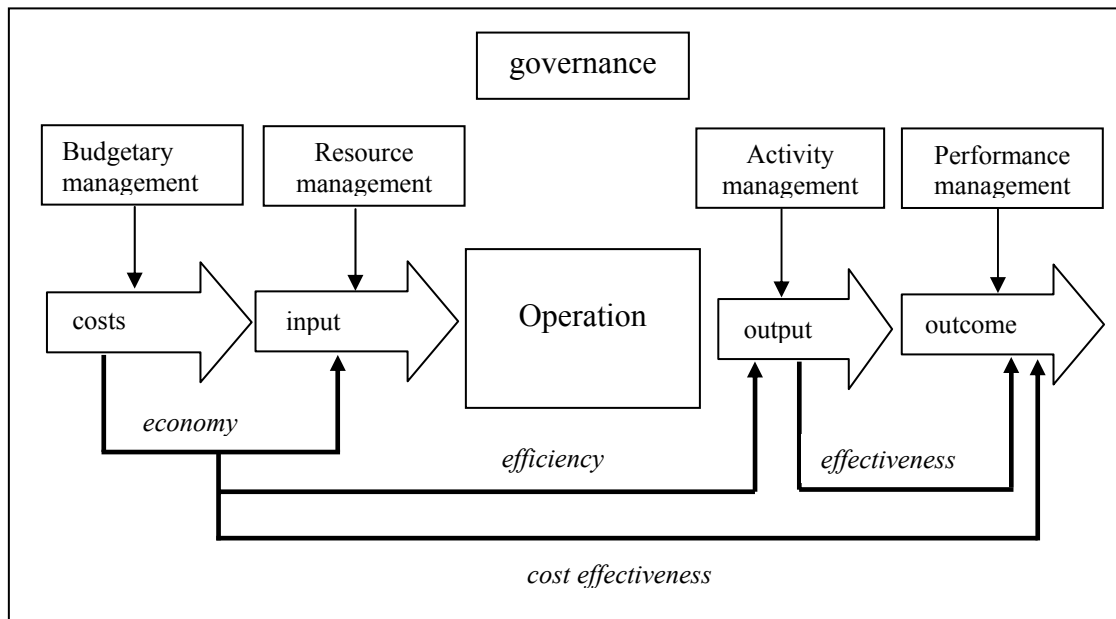


Figure 4: The management approach of the National Audit Office of Denmark.
Source: Planning, 2004.

The British reform program mentioned earlier has defined the 3Es as the following: economy measures the cost of input i.e. how much it costs to procure one unit of a resource. Efficiency measures the quantity of input used for producing one unit of output, whereas effectiveness is the ratio of outcome and output. Figure 5 shows the relationship between the latter two.

Operational efficiency	High	Do the wrong things well	Do the right things well
	Low	Do the wrong things badly	Do the right things badly
		Low	High
		Strategic effectiveness	

Figure 5: Efficiency vs effectiveness.
Source: Resource, 1999.

Using a mathematical formula, if we multiplied the three Es, we receive the value for money i.e. outcome/input costs, which expresses the cost at which we were able to meet the requirements of the society and the value that the organization had generated.

Figure 6 shows the operating processes of a performance oriented organization.

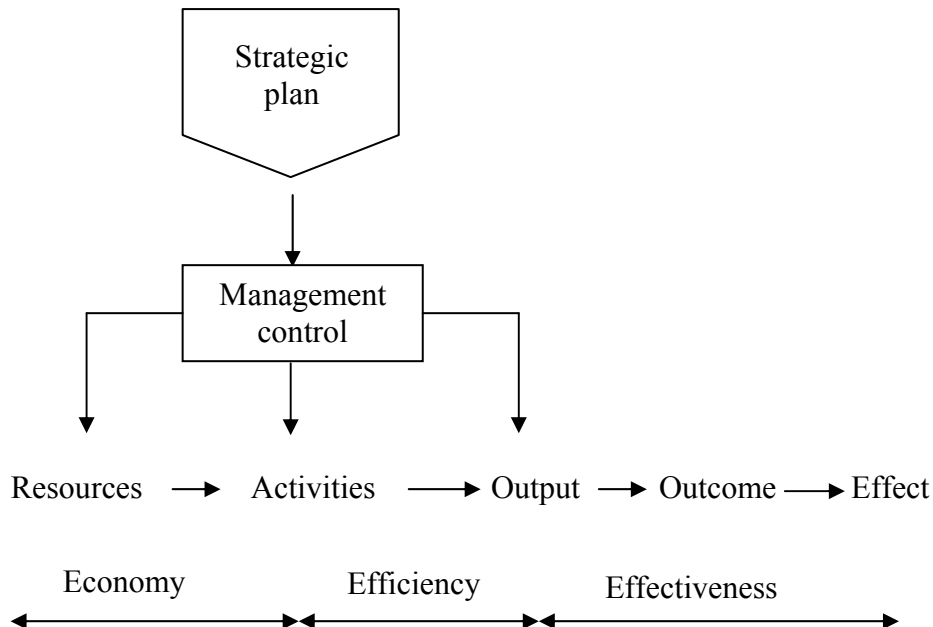


Figure 6: Operational processes of a performance oriented organization.
Source: OECD, 1996a.

6.2. The objectives and requirements of performance measurement

McKewitt and Lawton have studied the objective of performance measurement and have defined three functions for it in public administration:

1. Organizational function: the definition of such norms which define the most important objectives and values of the organization strengthening the commitment of the organizational players to fulfill these objectives.

2. Management function: continuous source of information on the relationship between actual and planned performance, thus providing the possibility for intervention.

3. Technical function: provision of information for the stakeholders about the performance of an organization.

The indicators measuring the performance need to meet several requirements both in public and private sectors (Király, 1999.):

- Homogeneity. In order to compare organizational units, the same indicators need to have the same substance, and the circumstances of measurement also need to be the same.
- Applicability. The object measured needs to depend on the operation of the given organization.
- Diversity by organizational level. Different indicators have to be used to measure the same activity depending on the organizational level, but identical indicators have to be applied at identical levels.
- Avoidance of side effects. Indicators have to be chosen so, that the attempt to increase them does not lead to the emergence of undesirable side effects.
- Rationality. This criterion refers to the balance between the cost and benefit. One has to refrain from using indicators that measure performance precisely, but are too expensive to generate.
- Multifaceted nature. In case of diverse activities, different indicators need to be used or one complex indicator is necessary, that is suitable to measure collectively the activities of the organization.

It is important to emphasize that performance indicators in themselves represent little information for their users. The assessment of performance can be

more meaningful if carried out by comparison, which might have different versions depending on the purpose of the assessment:

1. Fulfillment of norms. A comparison of performance standard and actual performance.
2. Measurement of progress. A comparison in time, how performance developed in comparison to earlier periods.
3. Organizational comparison. The comparison of the performance of the organizational units involved in the same activity.
4. Optimal performance. Compares the actual indicator of performance with an optimum value based on a method or a collection of methods used earlier.

One of the important requirements of performance measurement is that one should not only concentrate on easily measurable dimensions, because the management might become disinterested in safeguarding long term values. Illustrating it through the case of the Hungarian Defense Forces, in the current situation one of the key issues is the establishment of an appealing image, since from 2005 contract soldiers have to be recruited instead of the several thousands of conscripts in the Armed Forces.

In public sector there have not yet been defined a method how several different indicators could be transformed into one single indicator that covers the totality of the organizational performance. Market organizations do not only pursue one single objective, nevertheless the market provides economic indicators that help to assess performance, such as the profit, market share, or rate on assets.

In the market sphere, measuring financial performance can be the basis for assessing organizational performance, because the revenues generated by the company are also defined by performance. However, in the public sector the revenue

side in the majority of the cases is the result of a political agreement and only a narrow scope of revenues can be defined by the performance of a budgetary organization.

The problem of aggregating performance indicators is that they show different dimensions, there are several possible methods of measuring performance, and the requirement of several consumers has to be taken into account. Although public opinion often criticizes the quality of state services, this discontent is only based on impressions and not on some well-defined indicators.

Thus, we need a sound, transparent and robust process of aggregation, which results in one comprehensive indicator figure to show how efficient the organization was in transforming inputs into output, which is capable of managing information on inputs and outputs simultaneously, the indicator is not dependent on weighing figures or prices used, and which is capable of handling quality data besides quantity data (Miller, 1984.).

The measurement of performance can yield significant results in solving the financing problem of budgetary organizations. Organizations can be financed on the basis of previous year budget, until there are no clear performance requirements related to their tasks (Nyikos, 2001.). Osborne and Gaebler stated this by saying that a result oriented administration will finance outcomes and not expenditure (Osborne-Gaebler, 1994.).

Sally and Nagy thought it was too early that after 1989 the confused mechanism of budgetary bargaining was replaced by normative support. According to their opinion, there was not enough time to establish harmony between the indicators of the budgetary plans and the report and between other professional statistics (Sally-Nagy, 1994.).

The establishment of task related financing supposes that the accounting system is also made suitable to support financing, i.e. instead of a classification by economic categories the emphasis would be shifted to a functional classification.

The functional classification of revenues and expenditure in public finances is already operational, although the system requires significant modernization. Currently the functional classification is based on the classification system used in the European Union. The system classifies the different organizations according to their most characteristic activity, but of the 17 different sectors of national economy, only 4 detail public services.

The system does not really allow budgetary organizations performing heterogeneous activity to reclassify certain smaller volume activities into other sectors. This heterogeneity is all the more characteristic of the Hungarian defense sector, since beside defense organizations the budget contains the operation and maintenance of secondary and higher level educational institutions for military personnel, hospitals, recreation facilities, cultural centers, etc.

This classification is also criticized because of artificially maintaining sectors that have a very low volume, while the miscellaneous category is in certain cases too exaggerated, thus, there would be a need to further refine and reclassify tasks.

6.3. Models established to increase performance

We can measure the performance of public administration from a political aspect – the ability to make public/collective decisions – and on the basis of service delivery – efficiency and effectiveness.

John Kirlin states that public administration should not be defined on the basis of its observable manifestation, since public administration's most important task is

to promote social decision making and action, and not to provide services. On the basis of the standard public choice theory, the joint, unstructured decision of individuals pursuing opposite interest is irrational, unstable and unpredictable. Budgetary institutions play an important role in establishing stability and predictability (Salinas, 2002.).

Kirlin is on the opinion that measurement of performance also has to be established on a wider definition of governance. He separates three different cases:

- if there is a consensus in terms of the objectives and their efficient realization, then detailed central guidelines and controls are justified;
- if there is a consensus in terms of the objectives, but there is a disagreement in the implementation strategy, then incentives have to be used (rewards and punishments);
- if there is no consensus either in terms of the objectives or the method of implementation, then an interactive bargaining and learning strategies are recommended (quoted Miller, 1984.).

The measurement of services and outputs can also be approached from two different aspects: we can measure the achievement of organizational objectives and the quality of internal processes. In many countries they try to improve the efficiency of budgetary organizations through measures such as reorganization, publicity, and the introduction of management methods to improve decision-making and information processing.

Johnson and Lewin identified four different categories of management approaches aimed at increasing performance in the public sector (quoted Miller, 1984.). The so called (1) goal models place a great emphasis on the specification of a hierarchy of goals and organizational objectives. According to the (2) system model

better organizational performance is generated through a more efficient organizational structure.

The goal model, which is quite frequent in military organizations, looks upon an efficient organization as such that establishes its objectives, defines the activities required to achieve them, and then appropriates the necessary resources to the activity.

While the goal model concentrates on the achievement of organizational objectives, the system model states that the requirement and the expectations vis-à-vis a given organization change so swiftly, that it is impossible to cover the complete scope of activity with a finite number of organizational objectives, thus in many cases it actually fails to measure organizational performance. Organizational efficiency is looked upon as being such a complicated concept to measure, that in most of the cases it is characterized as being a combination of the quality of different system characteristics.

Instead of defining the concept of efficiency, there is an attempt to establish a group of variables that according to assumptions will lead to efficiency. Such could be environmental characteristics (input variables, output variables) characteristics of individuals (motivation, incentives), structural characteristics (centralization, decentralization, hierarchy, management attitude and style).

In contrary to the afore mentioned, literature based on systems analysis and operational research – 3) the planning models of decision-making systems – attribute efficiency and effectiveness to an appropriate structure of planning and decision-making.

Based on the economic sense of efficiency, an organization generating the most output from a given amount of input will be called efficient, just as the one achieving

a given output level with the least amount of input. That is if the organization is efficient enough, then the allocation of resources is Pareto optimal, and the reallocation of resources can only generate new value to the detriment of values elsewhere.

This principle in order to improve the efficiency of government programs considers it important to measure input and output and to compare allocation of resources in order to improve the system (by establishing alternative programs). The first substantial use of this structured comparison based system was the Planning, Programming and Budgeting System. This system was widely used in the 1960s in the United States of America, but later disappeared, or transformed or certain elements of it were used under a different name.

The zero-base budgeting tries to structure resource allocation decisions on the basis of performance of programs. When justifying the budget of agencies and programs not only the difference to the previous year needs to be justified, but the base figure as well (Illés, 2002.).

Despite the work intensity required by the zero-base budgeting, it has generated a 5-15% saving in administrative budget and overheads, and has proven to be a suitable tool to curtail expenditure. While studying the general costs, the process also attempts to unravel unnecessary functions, parallel and overlapping activities. Going bottom up in the organizational structure, budgetary requests have to be justified in detail, several solutions have to be set forth by each function. One alternative has to study the consequences of abandoning a function, which beside savings and benefits caused by the abandonment of such a function also analyze the drawbacks of this decision (Illés, 2002.).

Although the planning model of decision-making system tries to measure input and output, it is significantly restricted in the sense that it does not measure output for the totality of the organization. The comprehensive performance of the organization is defined as a result of the decision-making structure and other internal processes, just as in the system model, and is not an independent concept.

Finally 4) management sciences models depending on the characteristics of a decision (scope, organizational position, regularity, substance, final implementation) will use different analytic methods (mathematic programming, decision trees, simulations etc.) (Miller, 1984.).

The so-called Business Excellence Model of the European Foundation of Quality Management has been used in the private sector for quality management since the 1980s with the aim to increase performance. In the international practice, the quality management model used for public administration is the Common Assessment Framework (CAF), developed upon a mandate from the European Union.

The CAF system itself was developed from the EFQM model, which provides incentives to the organization for continuous control of performance and continuous quest for development opportunities. The system is mostly criticized for its subjectivity, since it is based on a self-assessment of the employees, although they have to prepare during the course of this assessment to defend their opinion publicly.

The model analyses 9 criteria of which 5 pertain to the organizational characteristics (leadership, strategy and planning, human resource management, consumer relations, process and change management), whereas 4 pertain to the performance of the organization (customer orientation, employee satisfaction, social influence, effectiveness) (Szente, 2003.). The objective of the system is not to unravel the shortfalls of employees, but instead to find the weak points of the processes and the system, and improve them (Sümegi, 2003.).

The CAF has already been used in the Hungarian public administration in the case of a few organizations, and there is more incentive to introduce it, because as of

2004, expenditure related to the introduction of a quality control system can be activated among the assets as cost of foundation and reorganization (Lilliné, 2004.).

Beyond the models described earlier, many authors expect the improvement of government performance from the feedback received from the citizens, thus, they propose that the budgetary reports and information on the organizational performance be published.

6.4. Performance budgeting

According to Diamond, the changes of the accounting system should follow and not lead a comprehensive budgetary reform. When introducing accruals accounting, the responsibility for processes could be replaced by responsibility for results. This would be the basis of a new performance budgeting model, the main elements of which are the following:

- preliminary and unambiguous specification of performance expected from agencies;
- decentralized decision-making, providing the necessary autonomy to the managers of an organization in order to achieve the target set;
- incentives and sanctions, which urge the managers to promote the government interest;
- preliminary agreement on information required for performance assessment;
- a clear process of performance assessment in which actual performance is compared with plans approved earlier.

Performance indicators are relevant, if falling behind or performing over a set target has its consequences both at organizational and individual levels. In most of the countries, performance information however does not have an impact on the budget.

The model for accountability in New Zealand is based on two important distinctions. One of them is the distinction between the interest of owners and consumers. The state in most of the cases is the owner of budgetary organizations, and it is the consumer of their services. The state as a consumer will define requirements vis-à-vis services, i.e. it will define the desired outcome, whereas the organization rendering the service will concentrate on the output (Webster, 1998.). Diamond argues that the advantage of accruals accounting is that it makes it possible to have a more distinct separation of these two interests, and to define the trade-off between the two.

The other important distinction is the one between output and outcome. The managers can be held accountable for things, over which they have influence. Outcome, however is dependent on many factors that a certain manager cannot influence. In New Zealand, the manager of a budgetary organization is responsible for generating a given output according to the price and requirements agreed with the minister, while the minister is responsible for selecting and defining the impact of outputs on the community, i.e. for the outcomes (Diamond, 2002.).

This complies with the requirement articulated by Weber, for exercising external political control over the bureaucracy, which states that politics and the different competency areas of bureaucracy and their related rights and responsibilities have to be separated. Politicians will set political targets, thus it is the responsibility of politics to select the desired outcomes, and it is the task of the bureaucracy to implement these in an efficient way (quoted by Gulyás, 2001.).

Diamond also emphasizes that it is only possible to make a manager accountable, if we loosen strict regulations and managers are granted some sort of influence. This approach led to the modification of rules and regulations on the

employment of civil servants in many countries introducing budgetary reforms, which have made it possible for the manager of an organization to have a say in the selection of human resources (Diamond, 2002.).

The fact that instead of the inputs we are concentrating on outputs will not cause and automatic emergence of a link between budgetary allocation and performance. In the case of New Zealand, the above-mentioned link is the strongest, because the approved budget prepared in accruals approach is based on the agreement in which the minister and the head of agency agrees on the conditions of output procurement. The output expected from ministries and the financial performance is shown in one single report, which also set forth the budgetary requirements.

The system in New Zealand however, has been subject of criticism during the recent years, because it places a greater emphasis on the measurement of output vis-à-vis outcome, and does not study whether programs achieve the desired impact. Therefore, the system is capable of generating output in a cost efficient way, using innovative and consumer focused solutions, but it is inappropriate to decide what to do if technical efficiency prevails, but allocational efficiency does not (OECD, 2002c).

The use of the annual report is more and more popular to provide a link between budgetary and performance information. Australia, Sweden, Finland, Canada are all heading in this direction, because according to their opinion, budgetary restrictions are better incentives for managers to terminate unnecessary spending, than performance orientation (Diamond, 2002.).

In summary, inputs are still very important budgetary guidelines, and the relationship between performance and budget is not direct and automatic. The

pressure related to budgetary restrictions shifts the use of performance information towards ex-post analysis.

6.5. Performance audit

Performance audit in terms of subject studied has two different types. Substantive audit ex-post studies the performance of programs or activities, compares it to a given standard, whereas a system audit studies the adequacy of performance information and their use.

Performance audit, as it is in its name, is related to auditing. Table 4 shows the differences between traditional audit, performance audit and program evaluation.

	Traditional audit	Performance audit	Program evaluation
Image of government	Bureaucratic machinery	Input→process→ →output→outcome	The objective of government intervention is to solve collective problems
Meaning of efficiency	The performance of activities and tasks are defined by efficiently regulated processes	The optimalization of organizations and activities depends on objectives and restrictions	A program achieves its objectives if collective welfare improves
Primary objective	Adherence to regulations	Accountability on performance	To provide useful feedback on the efficiency of the program

Table 4: Comparison of traditional audit, performance audit and program evaluation.
Source: OECD, 1996a.

The performance auditors ascertain whether tools used are in harmony with the objectives and the possibilities. Performance audit contrary to its name is not closely related to auditing. One should however not forget that one of the objectives of

traditional audit is also a study of performance. We could say that traditional audit is such a performance audit, where performance means economy, i.e. the use of inputs without excess.

Accountability on performance also creates some requirements vis-à-vis accounting. An accounting system will be suitable if it can demonstrate that public funds were used efficiently and effectively. Its specification depends on how we measure efficiency and effectiveness.

The difficulties lying in the process of performance assessment also reinforce the need for performance audit, review and assessment. One has to study the choice of indicators (validity, suitability) collection of data and analysis (reliability), quality of information (precision, completeness) the standards and criteria of assessment, the explanation of results and the relevance and adequacy for decision-making.

In the United States of America, the General Accounting Office also extended its scope of authority to performance audit and program evaluation. It has studied adherence to financial regulations, economy, efficiency, effectiveness and the applicability of tools used to achieve targets and objectives.

In New Zealand, performance information also has to be audited, during which the precision and the comprehensive nature of information is studied. In the UK it is only the financial report that is audited, whereas performance related information is not. In Australia adequacy to decision-making is studied, while in Canada they study the monitoring of processes aimed at achieving economy and efficiency and also processes measuring and reporting the effectiveness of programs.

In conclusion, we can state the following:

- in many cases it is the measurable, yet not important area of activities that are measured;

- the establishment of a system of measurement is sometimes too hasty;
- financial objectives still have a higher priority contrary e.g. to the quality of service;
- the trade-offs between quality and efficiency are sometimes unclear;
- there are often no clear indicators attached to general objectives;
- the achievement of target numbers is frequently over emphasized instead of the achievement of objectives;
- time series are not established, which makes comparison difficult (OECD, 1997.).

7. Balanced Scorecard

7.1. *The basic idea*

There have been numerous attempts in public administration to tailor the methods used with success in the market sector. One of such attempts was the Balanced Scorecard system, which tries to transpose the vision and the strategy of the organization into such a comprehensive system of indicators which at the same time also defines the strategic framework of performance assessment and management.

It tries to establish a balance between four different perspectives: financial, customer, internal business processes, and learning and growth. At the same time it also establishes a link between corporate strategy and operative management. It sets forth in a comprehensive report the most important factors for an organization (Kaplan-Norton, 1999.).

According to the definition of Lawton, the Balanced Scorecard is such an integrated report that shows which dimensions of performance are the most important for an organization. It is balanced, because it sets forth in one single report all the most important objectives and indicators relevant to different dimensions and thus, it provides a multidimensional and comprehensive picture of the organizational performance (Lawton, 2003.).

Hársvölgyi and his co-authors look upon the Balanced Scorecard as the collection of interrelated targets, success factors, indicator numbers, and target values, which together describe the strategy of the organization, thus sets the paths which allows the implementation of the strategy (Hársvölgyi et al, 2002.). Hence, the Balanced Scorecard is not a tool for setting the strategy, but more for implementing

the strategy, which establishes the relationship between strategic and management control.

Kaplan and Atkinson used the management accounting to measure all the four dimensions of the Balanced Scorecard. In the case of operational processes, they have considered it important to measure the length, the cost and the quality of the process, while for human resources the key dimensions are the retention of the employees and the coverage of strategic posts (Kaplan-Atkinson, 2003.).

Management science tends very frequently to criticize accounting based corporate management, because resources and factors that do not appear in the balance sheet according to current rules become more and more important. According to Lengyel, significant part of the difference between book value and market value of a company is the intellectual capital, which can be divided into three parts: client capital (customers), structural capital (operational processes), human capital (learning and development). The Balanced Scorecard provides an opportunity for the conversion of intellectual capital into financial capital at a strategic level (Lengyel, 2001.).

A similar tool mentioned in French literature is the Tableau the Bord (dashboard), which was already used in the first decades of the past century to improve manufacturing processes by identifying the cause and effect relationship between activities. This system measures performance through the following steps (Wimmer, 2000.):

- identifying organizational objectives;
- specifying alternative actions (what kind of action is required to achieve the given objective);
- identifying the person responsible for meeting the objective;
- specifying the indicators appropriate to monitor objectives and alternative action;
- compiling the Tableau the Bord, developing the form and content of reports generated for the different levels of management.

Both the American and the French approaches emphasize that the system of performance management should support the achievement of strategic objectives and apart from financial information, non-financial information should also be used to measure performance. Both tools are

suitable to provide an incentive to management to articulate a clear, widely accepted strategy (Epstein-Manzoni, 1997.).

Epstein and Manzoni also emphasize that the majority of companies generate reports on the non-financial dimension of performance, but the great advantage of Balanced Scorecard and its French equivalent is that all these are summarized in one single document. Numerous French authors look upon the Tableau de Bord as a more wider ranging general tool, while the Balanced Scorecard is a special case of the Tableau de Bord (Bourguignon et al, 2001.).

Bourguignon and his co-authors were critical of the Balanced Scorecard and called attention to the need to study the cultural environment before its implementation. They have identified as a common characteristic that both systems are geared to eliminate the dominance of financial indicators and place the emphasis on pro-active rather than reactive intervention, while articulating the need for only a few, but very important variables (Bourguignon et al, 2001.).

7.2. The Hungarian experience of implementing the Balanced Scorecard

Several Hungarian companies have experience in implementing the Balanced Scorecard. They look upon it as a tool, which can provide spectacular results in implementing the corporate strategy. Its importance is also justified by the fact that no organization can achieve permanent success and development without assuring that the employees know the strategy.

To highlight the importance of knowing the strategy and the importance of the relationship between the strategy and the daily operation Szegedi cites the survey of Fortune Magazine, which concluded that 90 percent of organizations are incapable of realizing their strategies (Figure 7).

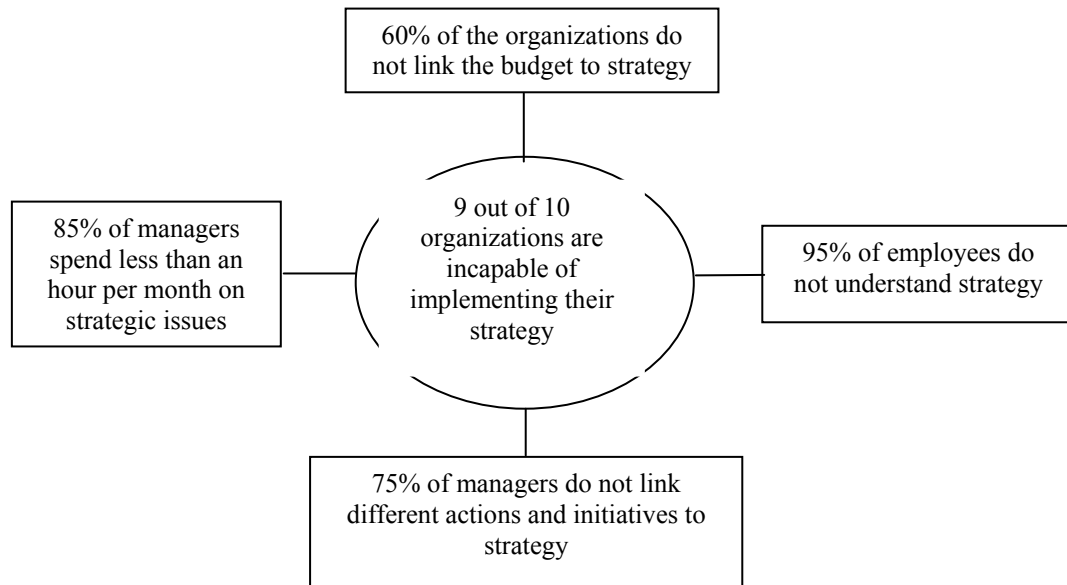


Figure 7: The link between strategy and daily operation.
Source: Fortune Magazine, quoted by Szegedi, 2003. p. 204.

The Balanced Scorecard does not imply the need to continuously perfect every internal process. On the contrary, it is a tool to help organizations to concentrate on value generating and important core processes. The so-called critical success factors provide the basis for the definition of the most important processes and they continuously monitor and improve these indicators (Kaplan-Norton, 2002.).

Várkonyi sees the benefits of the Balanced Scorecard in that it provides well-articulated and structured objectives based on the strategy, shows the relationship between objectives, and on the long term, it also allows the study of the relationship between objectives and their review. The Scorecard is an excellent tool to disseminate strategy within the organization and it helps the allocation of resources to the places most needed (Várkonyi, 2003.).

In order to maintain transparency, the Balanced Scorecard is capable of defining and managing the maximum of 25-30 indicators derived from organizational strategy. When defining these indicators, one has to pay attention to assuring a balance between lagging indicators and leading indicators. Table 4 shows

the differences between traditional measurement of performance and Balanced Scorecard Indicators.

BSC indicators	Traditional indicators
They only concentrate on strategic areas	Measure the complete scope of operation
Organized according to a logical sequence	There is no cause-effect relationship
Planned figures are always derived from strategy	Planned figures are not always derived from strategy
Expectations are articulated for a longer period	Target values are articulated for a shorter period
The strategy is communicated	The strategy is not communicated
Actions are defined for every objective and indicator	Actions are not defined for every objective and indicator

Table 5: The comparison of Balanced Scorecard indicators and traditional indicators.
Source: Várkonyi, 2003, p.201.

On the basis of the Hungarian experience in implementation, it can be said that implementation is only possible through an incremental process and on a project basis, in larger organizations it is impossible without any information technology support, and there is a constant need for the training of participants to keep them informed and to establish their commitment. The selection of indicators and the setting of target values has to be managed from the top by involving the relevant areas of expertise, the concentration should be on core activities, and there is a need for continuous revision of the indicators.

The popularity of the Balanced Scorecard shows, that there is more and more interest in measuring and improving performance both in the public and in the private sector. Lawton however, draws attention to a frequently committed mistake: organizations tend to use the Balanced Scorecard as a dashboard, and concentrate

purely on reaching the target value of indicators instead of meeting objectives and implementing strategy. In order to avoid accidents, it is wiser to look out through the windshield to the road, instead of continuously looking at the dashboard (Lawton, 2003.).

A fundamental change in the basic circumstances (a change in top management), the poor quality of the Scorecard (too many, too few or unbalanced indicators), and problems arising during implementation (lack of commitment of the management, insufficient number of employees involved, extended delay in implementation) can cause the failure of the Balanced Scorecard (Lengyel, 2001.).

7.3. The Balanced Scorecard in the UK Ministry of Defense

The British Ministry of Defense also attempted to introduce the Balanced Scorecard. According to their study the benefits of the Balanced Scorecard lie in the fact, that it allows a more focused management, more balanced decision making, flexibility, and its clear and transparent form supports decision-making. They identified as disadvantages that the Balanced Scorecard is only worth as much as the information behind it, and because of the difficulties in operationalization and measurement, its assessment is subjective (Performance, 2000.).

Prior to implementation, the MoD studied how the perspectives used in the entrepreneurial sector can be interpreted in the public sector, in particular in the field of defense. They have come to the conclusion that the number of perspectives should not be changed, it is only their name and their substance that has to be somewhat modified. (The strategic map of the UK MoD is shown in Annex 2.)

Customer perspective, since in a business sense the Ministry does not have actual consumers, was changed to Output/Deliverables. The substance of the

Financial perspective differs from the perspective used for companies, because the objective here is not the profit, but an efficient and effective use of resources. Thus, it was transformed into Resource Management.

The Learning and Growth perspective was named building for the future, although development here does not imply the development in quantity, rather in quality, especially in terms of human resources, information technology, research and development. The Operational Processes are named Enabling Processes, to highlight their importance in increasing performance.

Strategic objectives were transformed into the four perspectives according to the following:

1. Outputs/Deliverables: successful operations, the establishment of a well prepared Armed Force, defense structure complying with the defense review, capabilities, and the implementation of the defense policy.
2. Resource Management: the preparation of a well-balanced program, the control of annual expenditure, balanced human resource figures, the implementation of annual investments in military technology, building reputation.
3. Enabling Processes: the improvement of teamwork, benefiting from accruals accounting and smart procurement, introduction of performance management.
4. Building for the Future: developing the personnel for the future, strategic assessment, use of information, research and technology (Hally, 2004.).

8. The Hungarian prospects of performance management in public sector

Studying the reform attempts and their failure in Hungary, Hazafi says that in the majority of the cases, it did not look for increasing performance, rather it tried to adapt methods successfully implemented elsewhere, but disregarding the values related to the social and the cultural environment (Hazafi, 1995.). This is furthermore justified by another survey according to which public sector managers look upon the organizational culture and the leadership style as being less changeable than organizational strategy (Dinya, 2002.).

One however has to take into account that certain reforms in other countries have actually resulted in a change of the organizational culture, hence the failure of the Hungarian reform attempts sometimes was rooted in the selected method, or in the timing and the schedule of implementation, in the communication, and in the lack of necessary conditions for implementation.

To illustrate it with the transition to accruals accounting and the implementation of performance management, it is useless to implement accruals accounting, if we do not use the extra information to improve organizational performance. However, if we only try to implement performance management, but our accounting system cannot provide the necessary information for performance indicators, then we are doomed for failure, although both reforms in other countries have been conducted with success.

Hazafi also reckons as a further problem, that every reform resulted in the reduction of personnel and in most cases, it only amounted to it. Thus, the continuous downsizing led instead of cheaper public service to an increase of expenditures (Hazafi, 1995.).

8.1. The legislative background of performance management

The implementation of the so-called Transparency Act may provide a new impetus to more efficient management of public funds and assets. By modifying certain regulations pertaining to budgetary organizations, this act wishes to achieve two main objectives: on the one hand, to curtail corruption in the public sector, on the other hand to eliminate the possibility of mismanagement of public funds and assets, and to achieve a more efficient and transparent use of taxpayers money. In this thesis, I only wish to deal with the latter objective.

The basic idea of the Act is that in certain cases, publicity itself can replace market mechanisms. Legislators, when they decided to provide credible and understandable information to the citizens, aimed to strengthen public confidence, the commitment of the society towards democracy, and more consumer focused approach.

Legislators tried to ascertain the most typical sources of losses in the public sector, and ordered the regular publication of data related to them. This information is accessible for everyone, because it has to be published in every quarter of a year on the website or in the official journal of the given ministry in a form that is easily understandable for the public.

This data set primarily aims to reduce mismanagement, but only covers a fraction of the complete budget. A much more important, yet less developed area of this act is the measurement of the efficiency and effectiveness of budgetary organizations through the use of performance indicators. The Act wishes to grant the possibility to taxpayers to see what they receive for their taxes, and to see whether public funds and assets have been used in a cost efficient manner.

The government decree that has been published in conjunction with the implementation of this act makes it mandatory and leaves it to every portfolio to define the methodology and the indicators (capacity, task, performance, efficiency, effectiveness) that allow the performance measurement of the organizations using public assets and funds.

The transparency of the use of public funds and public assets is not only provided through financial data, but also through the underlying performance, the efficiency of professional work, and related processes.

The Act approaches performance measurement through the measurement of effectiveness as well, and orders the regular measurement of consumer satisfaction, since the objective of public policy decisions and the outcomes of the implementation, according to empirical studies, many times are not in harmony. Analysts have realized that it is not enough to justify political decisions, it is also important to study the result with which the bureaucracy performed a given task (Jenei, 1997.).

The implementation of the Transparency Act is decentralized, the above-mentioned data do not constitute a part of the budgetary report, the budgetary organizations publish it individually. Beside this, the new regulation also makes it possible to the citizens to ask for further information, but they need to cover the cost of generating information to answer their questions.

The idea of decentralized implementation could be justified by the fact that in the public sector there is no method to compare performance, since e.g. completely different indicators will characterize the efficiency of the organizations in the defense sector or the health sector. The fact that in both cases we talk about budgetary

organizations does not mean that we should consider them identical in terms of substance, organization and operation.

In my opinion, however the decentralized implementation is more the consequence of the complicated task, because there has not been any centralized effort to establish a methodology, despite the fact that it would be possible to define basic criteria and requirements vis-à-vis a system of performance measurement at central level, and the system could be tailored to the needs of the individual portfolios. There has not been a study of impacts ordered by the government either on the set of necessary conditions or the minimal human resource, organizational and technical requirements related to the implementation of the Act (Kovács, 2003a).

It is already visible that the introduction of the system requires significant surplus resources on the short term, however on the long term has the advantage that it establishes a standard framework for reporting on professional activities and integrates it with the financial report.

In terms of the objectives, savings are of utmost importance, since the impact of publicity is greater efficiency that can lead to savings of budgetary resources, thus, with their reallocation to other areas the role of the state and the reallocation of incomes can be reduced.

8.2. Performance audit

The efficient functioning of the performance management system supposes that external authorities scrutinize performance related information i.e. beside adherence to legal regulations, a performance audit is also required.

The Ministry of Defense in this sense is an exception in Hungary, since the State Audit Office does not conduct a performance audit, nor does it any audit of the budgetary report that would certify the reality and reliability of the report. Based on

international experience and through pure logic, traditional audit should precede performance reviews, since this can certify the correct database required to establish performance indicators.

Taking into account the size of defense portfolio and the capacity of the State Audit Office in terms of the number of personnel and other resources, it is questionable, whether the supervisory authority could be capable of auditing the budgetary report of the portfolio even if relevant security regulations, which currently prevent it from auditing, were lifted.

The State Audit Office is primarily preparing to carry out the tasks for which the Transparency Act set a deadline. According to the new rules, the State Audit Office has the right to carry out audit at any organization using public funds, thus, its increased tasks in the near future will not allow performance audit avail over the simple scrutiny of adherence to regulations.

According to Nyikos, when it comes to reporting on the use of public funds, one has to find an answer to the following questions: who needs to report, on what, and who is to be reported to (Nyikos, 2003.). In terms of finding an answer to these questions, the Transparency Act did result in some progress, however beside legal regulation, there is also a requirement for establishing a professional regulation to decide on the procedures and methods of reporting.

In theory, the supervisory authority can study the expediency of public spending, but in the majority of cases questions there are no remarks on it in audit report. The difficulty to decide whether the public spending was expedient or not, lies in the fact, that the circumstances of the decision-making at the time when the decision was made are not documented as much as the final decision and its

consequences. That is why it is difficult to prove later on in an objective way, that another decision would have resulted in better efficiency or effectiveness.

According to Nyikos, the current situation is not satisfactory, since the Hungarian Auditing Standards in their foreword already emphasize that the use of the standards can only be introduced in the private sector, and do not refer to the budgetary sector. It identifies the fact as one of the main differences between the two auditing activities, that an auditor in the private sector does not conduct performance audit, because the market controls the efficiency of a business organization.

However, there is no possibility to study the performance of the budgetary organizations according to such objective criteria that is why the Transparency Act places a higher emphasis on efficiency, rather than adherence to rules. According to Nyikos, International Standards regulating the audit of budgetary organizations should be tailored to Hungarian needs and introduced in the public sector (Nyikos, 2003.).

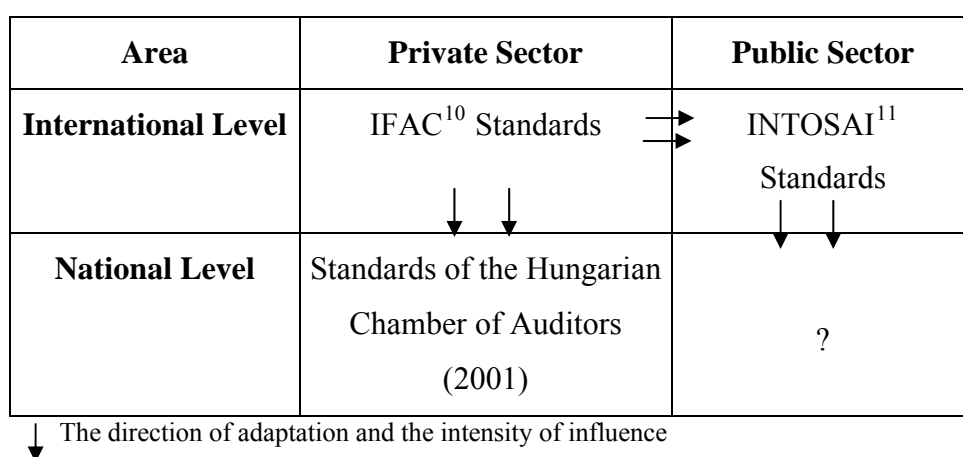


Figure 8: National and international standards of auditing.
Source: Nyikos [2003] p. 5.

While Nyikos urges for a domestic tailoring of standards referring to the public sector (Figure 8), Bihary does not agree with this opinion. He argues, that there is no

¹⁰ International Federation of Accountants

¹¹ International Organization of Supreme Audit Institution

national character that would require the tailoring of these standards, thus, audits have to be executed on the basis of international standards, just as it is done by the auditors of the European Union and NATO (Bihary, 2003.).

As we can see, the implementation still requires further thinking, since there have been task indicators in use in public administration before, but the aim is not that we generate indicators, rather it is to fill them with substance and to relate consequences to them. We also have to take into account that the cost of generating information should not exceed the benefits of using this information.

As every assessment, the performance assessment is also relative, absolute numbers do not carry too much information, they need to be related to something. If the data of different organizations are not identical because they carry out different tasks, then there is a possibility of comparison in time, especially, if we have data pertaining to different time periods, or we can integrate professional and financial data in order for example to define the unit cost of outcomes (Budget, 2002.).

In order to measure performance Reke used multivariable statistical methods. Indicators suitable for the measurement of input and output were defined and then using a sample of companies, the indicators were transformed into independent factors, in order to eliminate multicollinearity (Reke, 1995.). By selecting one or two indicators that were the most descriptive of a factor, it became possible to actually define a relatively small number of indicators, which measured the different dimensions of performance relatively well. Later on, there was also an attempt made to use cluster analysis to support management decision-making (Reke, 1997.).

9. The management of the Hungarian Defense Forces

National defense is a public good, thus it has the characteristics of indivisibility, nobody can be excluded from assumption, zero marginal cost, the problem related to the availability of information and the presence of externalities. The theoretical background of efficient management of public goods is discussed in the public choice theory, however this thesis does not discuss it in detail.

Certain authors do not look upon national defense as being a pure public good, because if an Armed Force has been deployed on a front, then it is not sure, that it would be able to defend from another attack coming from another direction, thus, people living in the latter area would not enjoy the same level of protection (Cullis-Jones, 2003.). However, this logic disregards the fact that the defense forces by fending off the first attack protected every citizen of the country, and the second failure will also have overall impact on the whole population, although it will differ in time.

Stiglitz looks upon national defense as a pure public good, and when discussing the problems of allocating defense resources it highlights that sometimes assets (the procurement of weapon systems) and objectives (the establishment of a defense capability) are confused, the total cost of defense is almost never revealed, and in many cases technology directs innovation, which means that certain assets are decommissioned, because something more advanced has appear on the market (Stiglitz, 2001.).

The scope of public services depends on the development of a society and on political and economic decisions. Public service provides the same conditions for every member of the society, thus with the increase in the development of a country and the increase in the standards of living there is a decrease in the demand for

uniform services (Illés 2000.). Defense in this sense is an exception, there will always be a need for it and this need might even increase with the increase of development.

9.1. The command system and the management of the Hungarian Defense Forces

With the integration of the Ministry of Defense and the Defense Staff, the MoD besides its public administration tasks as a ministry is also responsible as a military organization for the command and organization of the Hungarian Defense Forces (HDF). The high-level supervision of the Hungarian Defense Forces is thus carried out by the MoD, the intermediate level executive organizations are the Land Forces Command, Air Force Command and the Joint Logistics and Support Command.

Executive and professional control are separated in the MoD and the HDF. Heads of departments and directorates within the MoD, as functional managers are responsible for professional issues, they are professional supervisors of the HDF in issues pertaining into their scope of activity.

The management of the Hungarian Defense Forces is primarily set forth by rules and regulations pertaining to every budgetary organizations, but any exceptions to the general rules are set forth in separate government decree that covers the management of public funds and public assets.

The minister exercises his authority as an executive in certain issues through the commander (leader) of the defense organizations, and has the right to centralize certain responsibilities and obligations of the commander, and delegate them to designated defense organizations.

Regulations related to the management of budgetary organizations detail the tasks that their financial organization has to perform. Defense organizations

characteristically do not have their own financial organization, the majority of such tasks are performed in a centralized way, and designated organizations specialized in each area provide those services as supplies in kind.

The ministerial regulation setting out the detailed regulation on the management of funds by the defense organizations set forth that the management is mainly done centrally through central services and central supplies in kind, and the institutional level of management only has a secondary role.

The planning, procurement and management of resources required by the defense organizations to perform their duties, and the planning, implementation, supervision of the budget is carried out by designated defense organizations.

The following tasks are carried out centrally:

- allocation of human resources for the whole HDF;
- management of salaries except for civil servants;
- development, investment, renovation, decommissioning, and scrapping of assets of military technology;
- investment in real estate, construction, renovation;
- housing;
- management and sale of state assets;
- insurance on personnel and assets;
- execution of centrally managed procurement;
- environmental protection, safety regulations and fire protection.

The following are also managed centrally, but the budget provisions covering the expenses are approved in the budget of the defense organizations:

- the calculation, settlement and payment of salaries to the personnel;
- certain financial and accounting services for defense organizations that do not have a financial organization;
- providing fixed assets, stocks, services, and information that is related to supplies in kind;
- management of financial issues related to international relations;
- management of import procurements.

The management of state assets is also carried out centrally, the rights and responsibilities of a trustee, such as the sale of assets do not belong to the commander of the defense organization. The commander has the right and the responsibility to manage the assets available for the defense organization, but has little influence on the quality and quantity of those assets. Even if an asset becomes unnecessary for the operation, the commander has to obtain the approval of the functional managers who are responsible for the portfolio level management of that asset, and after that the Chief of Defense Staff will certify for the trustee, that it is unnecessary for the operation of HDF.

The salaries and the social security expenses attached to them, which amounts to approximately 40 percent of the defense budget, are calculated and settled centrally. Law regulates most of the components of the salaries, the amount depends on the rank, appointment etc., but not on the performance of the individual, consequently, the commander has almost no influence on them.

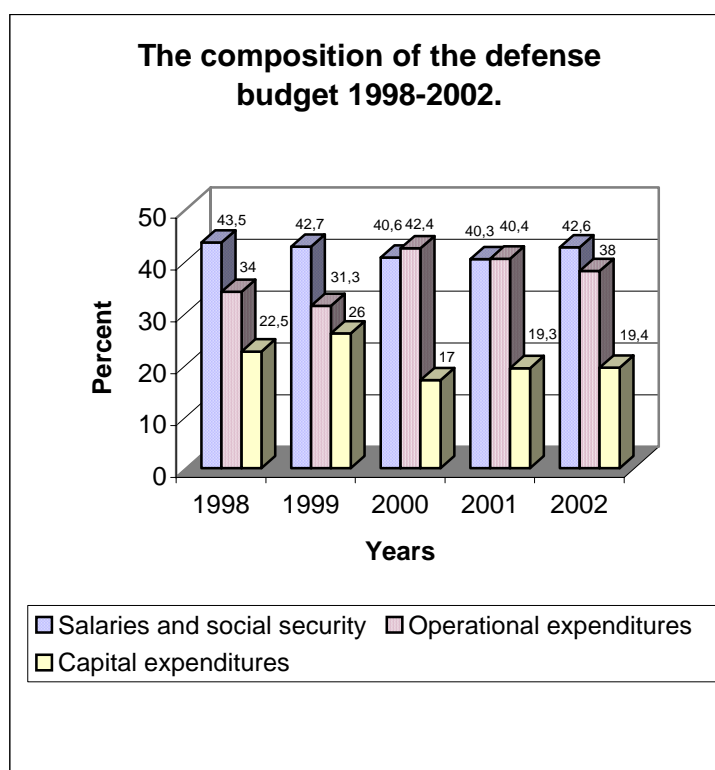


Figure 9: The composition of the defense budget 1998-2002.
Source: Four years of defense 1998-2002. p. 206.

The commander of a defense organization has limited influence on the selection and employment of personnel either, since employer rights are also centralized. The promotion of military personnel, which is the precondition for the appointment to a higher position, is also determined by law, there is no possibility of promotion by merit or performance.

The revenue side of the defense budget is also an exception compared to other portfolios, because after becoming a NATO member, the government undertook the commitment to appropriate a fixed percent of the GDP to national defense. It follows from this that the defense organizations receive public funds from the State Treasury to cover all of their approved budgetary expenditures, while other portfolios are expected to generate some revenues to cover a part of their expenditures. In return, defense organizations have to transfer their revenues to the State Treasury.

The reasons behind these special regulations stem from the special designation of defense and the fact that meeting the strategic objectives of the defense portfolio is impossible without overarching programs. Defense organizations are unable to defend the territory of Hungary without coordinating their individual efforts. It is therefore necessary to unify the requirements vis-à-vis military assets, to guarantee interoperability, and the level of supplies should also be identical.

9.2. *The accounting system*

The financial part of the accounting system of the defense portfolio does not comprise any specialty compared with other budgetary organizations, except for the valuation of special military assets.

The budgetary appropriations and the actual figures are recorded in the Financial and Accounting System of the MoD Budgetary Management Information System. As for public assets, the MoD does not have an on-line system with a unified database to keep track of the movements in assets, the individual defense organizations keep the records independently from each other, but using the same methods and the same software.

The separation of financial and management accounting is somewhat different from the market sector, because in the public sector the budgetary organizations have to report on the number of personnel within the framework of financial accounting, and the budgetary report contains the actual expenditures and revenues, as well as their planned figures.

There is no initiative in the public sector to establish a management accounting system, since the management of budgetary organizations is determined by rigid rules (Csepregi, 2002.), and managers cannot use the information gained from a

management accounting system, if the right decision based on accounting information would contradict those rules.

Another obstacle for implementing a management accounting system, as it was mentioned in Chapter 4, is that the efficiency of an organization cannot be assessed on the basis of expenditure, but in the cash based accounting system the cost is not recorded. In the case of the MoD, even the allocation of expenditures would be cumbersome, because as a consequence of the central management of budgetary funds only a small proportion of the expenditures incurred in the interest of a defense organization is included in their budget.

The simultaneous recording of budgetary appropriation and the actual revenues and expenditures should constitute the basis of a controlling system, but there are no fundamental deviations between the two, because of the financing system. As a general rule, budgetary organizations receive 1/12 of their annual budget per month, and they have to explain if the nature of the task requires an extraordinary financing schedule.

9.3. The prospects of public sector reforms in defense

Changes always bring about resistance in an organization, and as the size of the organization or its history grows, one should expect stronger resistance against implementing new ideas. This might be the reason that public administration reforms mostly appear when the old regime becomes impossible to finance (Pete, 1997.).

In the recent years, the defense reviews have become permanent and the Hungarian Defense Forces have undergone some reforms that left untouched the management methods and procedures, merely ordered the merger of some defense organizations to decrease the amount of necessary real estate, and also resulted in some downsizing of human resources.

In many countries that face similar problems to Hungary, the reduction of personnel is inevitable to strike the balance between the size of the Armed Forces and the economic capacity of the country (Yermakov, 2001.). Nevertheless, this does not increase in itself the efficiency of the organization, and it is questionable if the best way to grasp the size of the Armed Forces is through the number of personnel.

The current management system of the HDF is far from meeting the requirements of New Public Management, since the autonomy of the heads of defense organizations in professional or financial affairs is insignificant; consequently, accountability is reduced to adherence to rules and regulations.

Anthony and Govindarajan pointed out that a controlling system should be able to influence employees in order to implement organizational objectives. Because of the rigid rules and regulations pertaining to budget organizations, the opportunity to influence the staff is almost non-existent in defense. Financial incentives are very rare, since salaries and allowances are defined by law, while other incentives such as advancement in rank is also impossible to use, since the law sets forth the conditions for promotion (e.g. length of time in the previous rank, university degree etc.).

The Defense Planning System, which is currently under implementation, shows the characteristics of the goal model described earlier. The military planners define the activities that should be carried out in order to meet the strategic goals, then the need for human resources and other resources are identified, and finally the budgetary planners estimate the budgetary consequences of the plan.

The success of this planning system is questionable in the current management framework. The defense organizations, which hold the information about the activities carried out, are not aware of their total cost, since they have information on the expenditures that belong to the scope of institutional management. The main

portion of the defense budget is spent centrally, but the central suppliers cannot link the expenditures to tasks, since for example at the time of procurement, when the expenditure has to be registered in the books, it cannot be foreseen which organization will use the asset or the stock for which activity.

The central management of the defense budget facilitates the enforcement of economy because of the larger amounts procured and organizations specialized in procurement can achieve savings through their expertise. The gains of the central management in economy are partly lost, because the central supplies in their current form hinder the allocation of costs, thus the enforcement of efficiency.

10. Empirical research

I am convinced, that the Hungarian public administration reform can only be successful if instead of selecting and ordering the implementation of certain elements of international reform programs, first we need to create the preconditions of the introduction of an overall reform.

There was no feasibility study about the implementation of a performance measurement system, which was ordered for budgetary organizations. My hypotheses, filling this gap, study the possibilities of performance management within the current framework at one of the major players in the Hungarian public administration, the Hungarian Ministry of Defense.

According to my hypotheses, the legislation currently in force is not in harmony with the requirements of performance measurement. After their verification, I wish to formulate some suggestions on how to assure the necessary conditions for performance measurement.

10.1. The obstacles of measuring efficiency

International literature considers the greater freedom of managers in decision-making as a crucial precondition of performance measurement, which is accompanied by stricter accountability on performance. For the problems revealed by performance measurement, the managers can be held accountable if they had an opportunity to intervene.

10.1.1. The contradiction of performance measurement and the regulation of salaries

In the Hungarian practice, the rules and regulations pertaining to budgetary organizations set forth such detailed and rigid rules, that they make performance

measurement almost impossible. This rigidity could be proved in several areas, but this thesis will focus on the salaries and social security expenditures, which amounts to 40 percent of the defense budget.

H1. Before holding the heads of defense organizations responsible for the efficient use of expenditures on personnel, changes are required in the regulations in force, because the heads of defense organizations currently have hardly any influence on those expenditures.

The importance of this hypothesis is to demonstrate that more than one third of the defense budget is spent in a way, that no one can be held accountable on its efficient use.

The amount of expenditures on personnel can be influenced in two ways: either by identifying the level of salaries, or by changing the number of personnel. The regulations on personnel expenditures in defense are obstacles in both ways, since salaries are roughly the same regardless of the performance of personnel, and on the other hand they do not facilitate economical management, since if the manager decides to decrease the number of personnel, he/she cannot dispose over the savings generated by this decision.

H1.1. The major part of expenditures on personnel is determined by law, the payments allocated on the basis of a managerial decision are not significant.

H1.2. If the head of a defense organization does not fill all the available positions, he cannot decide about the reallocation of these savings.

The verification of hypothesis H1.1. is based on the expenditures of MoD in 2003, and on the laws and regulations pertaining to the salaries of the personnel of the Hungarian Defense Forces. First, I identify the share of salaries and social security expenditures within the total expenditure of the portfolio. These data are

recorded in the Financial and Accounting System of the Budgetary Management Information System, according to which the salaries in 2003 amounted to 98967.7 thousand Hungarian forints (HUF), while the social security expenditures were 28897.6 thousand HUF, i.e. altogether 40.83% of the total budget. After this I identify the components of the salaries that do not depend on the decision of the manager, instead they are paid if certain conditions are met e.g. allowance on foreign languages if the employee has a language certificate. This would also identify the leeway of the managers, i.e. the amount not determined by laws. In order to make my comparative analysis more transparent, I prepared a table to compare the three relevant laws (see in Annex 3).

For the verification, I analyze the laws pertaining to the salaries of military personnel, public servants and civil servants to identify the components that can be influenced by managerial decision-making. Before this analysis however I would like to observe that the salary of each individual is set forth by the order of the commander, this however does not mean that the manager has influence on the salaries, I assume that this order merely identifies the stipulations of the law that applies to the given individual.

The Parliamentary resolution on the composition of defense personnel orders to reach the composition shown in Table 6 by 31 December 2006. As the table shows, public servants and civil servants altogether will constitute 17 percent of defense personnel. The current proportions are similar, so the analysis will mainly focus on the link between the salaries of military personnel and their performance.

Categories	Number
Officers	7 500
Ensigns and NCOs	11 700
Enlisted ranks	13 350
University students	650
Public servants and civil servants	6 800
Total	40 000

Table 6: The composition of the personnel of the Hungarian Defense Forces
Source: Parliamentary resolution 15/2004. (III. 24.).

All the three salary systems¹² in review contain the same major elements: 1) basic salary, 2) salary supplement, 3) salary allowance, 4) miscellaneous allowances, 5) miscellaneous supplements are due to military personnel, public servants and civil servants as well.

I wish to identify the elements of the salary system, where the highest and the lowest value of the allowance does not depend on meeting an objective criteria such as holding a degree or being in a certain position for a certain period of time, but the amount is defined by the performance of the individual.

1.) As for the basic salary, in the case of military personnel the head of the defense organization can increase it by 20 percent, whereas for public servants, the actual amount of the basic salary can be 20 percent higher or lower than it is determined in law, but the difference to the previous salary cannot be more than 20 percent. The law pertaining to public servants links the difference directly to the performance of the individual, while the law on military personnel states that the difference can emerge on the basis of the judgment of the commander. A ministerial decree was issued to specify this rule, which gives this possibility to appreciate the

¹² There are different laws for regulating the salaries of the military personnel, public servants and civil servants.

outstanding performance of the individual if the defense organization has funds in its budget to finance the higher cost, and it is possible only for a definite period of time.

As for other civil servants, the basic salary cannot be altered, but if the individual permanently fulfills his/her duties with high standards, or in the case of outstanding performance the waiting period for the next payment category can be decreased by 1 year in each category.

2.) The salary supplement is set forth by law, and neither of the laws give the opportunity to the head of the defense organization to digress from it.

3.) The salary allowances do not depend on either performance or managerial decision. A military officer for example is entitled to receive salary allowance if his assignment is more dangerous than the average, it involves higher than average requirements or he/she has to tolerate unfavorable conditions, and those cannot be acknowledged in the basic salary. But the amount is due to the officer from the time of promotion to an assignment that qualifies for the allowance, and the performance or the evaluation of the commander has no influence on its sum.

4.) Among the other allowances, some seem to depend on performance, but most of them are linked to the assignment or depend on the quantity of tasks delivered, not on the quality. They do not depend on the evaluation of the commander, hence they are not appropriate to express the satisfaction of the commander with the quality of work.

Surveyor's allowance is the only item that allows the commander decide on its sum considering the performance, the environment, the type of tasks and the quality of work. However, the share of this allowance is so low and it is due to so few employees, that I disregard it during this study.

5.) Among the other supplements, the bonus is the only item that provides an opportunity to acknowledge performance.

As stated earlier, beyond the last two examples, other components of the salary depend to a certain extent on the duty fulfilled, but rather on the quantity than on the quality of it. In other words, all the three salary systems are basically based on assignments, not on performance, which is inappropriate to establish a performance management system.

To sum up the analysis, we can conclude that the only component of the salary that can be influenced by the commander is the bonus, which amounted to the 2.27 percent of expenditures on personnel.

In the case of military personnel and public servants, there is also a possibility to depart from the amount set forth in law, but this option can be applied only if the defense organization has the necessary funds to cover the surplus expenditure. The Human Resource Management Information System of the MoD is currently not suitable to prepare a report that shows at portfolio level the financial consequences of that rule, i.e. the amount with which the actual salaries paid differ from the amount set forth in law.

Because of the deficiencies in the information system, we can only estimate the amount of that deviation. Its maximum amount could be the 20 percent of the basic salaries, but the requirement that the defense organization has to be able to finance it further decrease the possible upper limit.

First we need to calculate the proportion of the basic salary within the total expenditure on personnel, but the actual sum paid on basic salary already comprises the deviation we try to estimate. Taking into consideration that in the case of military personnel the actual basic salary can only be higher by 20 percent than as it is

specified in law, and only for the public servants, the number of which is quite smaller, that deviation is possible in both directions, we can assume that the actual basic salary is not lower than the basic salary set forth by law (without the deviation). It means, that if we use the actual basic salary to calculate the deviation, we most probably will overestimate the leeway of the commanders.

The basic salary paid to military personnel and public servants constituted 58.9 percent of the personnel expenditures, 20 percent of which amounts to 11.78 percent. Adding the proportion of the bonus to this figure, we can conclude that in 2003 the heads of defense organizations could not determine more than 14 percent of the personnel expenditures.

H1.2. If the head of a defense organization does not fill all the available positions, he cannot decide about the reallocation of these savings.

I conducted further analysis of the rules and regulations pertaining to defense organizations to substantiate hypothesis H1.2. Each defense organization has a table of organization and equipment, and the number of personnel set in it cannot be exceeded, but it is not obligatory to fill in all the positions.

The system would meet the requirements of performance measurement even if the head of the defense organization could not influence the salary of the individuals, but he could reallocate the savings generated by leaving some of the assigned positions vacant.

To verify this hypothesis I analyze the laws and regulations determining the management of budgetary organizations in general and defense organizations in particular. I collect the rules that specify the rights of the head of defense organization in amending the budget and using the savings on expenditures on personnel for other purposes.

As we could see in Chapter 4.4, the general rules pertaining to budgetary organizations provide a relatively high level of flexibility to reallocate the savings, and restrictions mainly extend to the use of savings on material expenditures for paying salaries, aiming to prevent the misuse of public funds.

The situation is different in the case of defense organizations, since the payment of salaries fall under the scope of central management, except for the salaries paid to civil servants. The management of the salaries of civil servants is accomplished at the institutional level management. The head of the defense organization can decide about the reallocation of those savings according to the following rules:

- the savings generated by the difference between the approved average salary and the actual salary can be spent on increasing basic salaries or salary allowances;
- the savings due to the unpaid leave of the civil servants can be used for miscellaneous allowances and supplements.

All in all, the reallocation of savings on expenditures on personnel in 2003 was only possible in the case of the 7892 civil servants, and those savings, since the rules for defense organizations are more rigid than the ones applied for budgetary organizations in general, could only be used for expenditures on personnel.

In summary to support my position on hypothesis H1:

I have found hypothesis H1.1 to be correct, because in 2003 not more than 14 percent of the expenditures on personnel depended on the decision of the heads of defense organization, the rest was set forth by law.

I have also found hypothesis H1.2 to be correct, because the heads of defense organizations can only dispose over the salaries of civil servants. This constituted 4.9

percent of the total expenditures on personnel, and the savings on those items could not be used for other purposes than payments on personnel.

As a consequence of this, if the MoD wants to hold the heads of defense organizations accountable for the efficient use of personnel expenditures, then rules and regulations should be revised both at governmental level and within the MoD.

10.1.2. The centralization of management

International literature does not conclude the discussion on performance measurement with measuring inputs, outputs and outcomes, but it examines the relation between them, especially efficiency and effectiveness.

One of the obstacles to performance measurement in the Hungarian Defense Forces is the lack of a system that is suitable to measure output. This obstacle can be surmounted relatively easily, since there is no legal restriction that would prevent the HDF from doing so, it can develop a system measuring the outputs at its discretion, but so far, the will has been missing.

However, measuring the outputs would not solve all the problems, since the current information system is unable to measure inputs in a way that is suitable for calculating the unit costs of outputs, thus, the system does not support performance management. The accounting system of the HDF could be reshaped in order to make the allocation of expenditures by outputs possible, but as we could see during the discussion on the differences between cash based and accruals accounting, the allocations of cost is only possible after the transition to accruals accounting.

The attempt of the transition to accruals accounting in the 1970s was unsuccessful in Hungary, because the employees operating the system had to prepare reports in both approaches, and they could not see the benefits of the system, since the management in fact did not use the information generated by the new system,

they could only see the disadvantage of it because it doubled the work load. We can draw the conclusion from this attempt, that the HDF should not introduce the accruals accounting and operate it parallel with the cash based system of public finances, the transition is only possible at governmental level.

In the current situation, expenditures can only be allocated on inputs, on which the heads of the defense organizations do not always have influence, as we could see it by verifying hypothesis H1. With the following hypothesis, I wish to shed light on a further problem, since the heads of defense organization beside not having influence do not have information about the price of resources used for their activities either.

H2. Before introducing the measurement of efficiency, the information system of central management should be reshaped, because in its current form it does not provide full-scale information for the heads of defense organization about the expenditures incurred in the interest of their activity.

I also verify this hypothesis in two steps; first I determine the scope of central management within the management of HDF. The majority of public funds are used centrally, and those expenditures are not approved in the budget of the end user defense organizations, but in the budget of central suppliers. This in itself would not create a problem for measuring efficiency, if the heads of defense organizations would receive information about the incurred expenditures when receiving the supply in kind. In the second phase I prove, that the central suppliers currently do not provide this information.

To calculate the efficiency indicators, one needs the information on outputs and on the expenditures incurred in order to produce the outputs. In the current system the information on output is available at the level of defense organizations, just as the

quantity of inputs used for the production of one unit of the output. The information on the price of those inputs, i.e. the expenditures incurred is only available at the central supplier.

I suggest, that the efficiency indicators should be calculated at the level of defense organizations, not only because they have more of the relevant information about the activity, but because receiving information on expenditures would improve the cost consciousness of the heads of defense organizations.

H2.1. The vast majority of the defense budget is spent within the system of central management.

The structure of defense budget is detailed in Table 7.

1/1. Ministry of Defense	3/2. Military Security Agency
1/2. MoD Agencies	4. Zrínyi Miklós National Defense University
1/3. MoD Background organizations	5. Military prosecutors
2/1. General Staff and its subordinates	6. Military hospitals
2/2. Land Forces	7. Governmental Bureau of Frequency Management
2/3. Air Force and air defense	8/1. Estimates managed at MoD level – Investments
3/1. Military Intelligence Agency	8/2. Estimates managed at MoD level – Central programs

Table 7: The structure of the defense budget

Source: Act 62 of 2002 on the Budget of the Republic of Hungary for 2003.

To prove hypothesis H2.1 I analyze the budgetary expenditures of the MoD Chapter for 2003, which is shown by titles and economic categories in Annex 4. First I calculate the proportion of each spending category within the total budget of the budgetary title (see in Table 8).

Title/ subtitle	1. Salaries & social security	2. Material & other expenditures	3. Operational budget (1+2)	4. Capital budget
1/1	66.10%	13.82%	79.92%	20.08%
1/2	63.99%	33.15%	97.13%	2.87%
1/3	15.63%	62.36%	77.98%	22.02%
2/1	28.59%	45.40%	73.99%	26.01%
2/2	88.96%	10.91%	99.87%	0.13%
2/3	77.84%	22.07%	99.91%	0.09%
3/1	65.31%	28.21%	93.52%	6.48%
3/2	87.11%	9.51%	96.62%	3.38%
4	71.44%	22.23%	93.66%	6.34%
5	89.76%	10.24%	100.00%	0.00%
6	64.41%	35.20%	99.61%	0.39%
7	74.63%	20.28%	94.92%	5.08%
Total	46.42%	37.80%	84.22%	15.78%

Table 8: The distribution of expenditures within the budgets of the MoD titles/subtitles

The share of the operational budget is over 90 percent for the majority of the budgetary titles (except for 1/1, 1/3 and 2/1), which suggests a strong centralization of capital budget. As for the expenditures on salaries and social security, except for subtitle 1/3 and 2/1, where its proportion is under 30 percent, its share is between 64-90 percent. As we saw during the verification of hypothesis H1, the head of defense organization has no real influence on this spending category, which constitutes more than two thirds of the institutional budgets.

In the following step I identified the share of each title within the total budget of the defense portfolio (see in Table 9).

Title/ subtitle	Number of personnel	1. Salaries & social security	2. Material & other expenditures	3. Operational budget	4. Capital budget	5. Total expenditures
1/1	2.24%	5.80%	1.22%	3.52%	4.55%	3.58%
1/2	1.17%	2.42%	1.27%	1.85%	0.28%	1.55%
1/3	3.75%	6.30%	25.37%	15.79%	22.94%	16.45%
2/1	26.95%	24.23%	38.86%	31.51%	57.02%	34.61%
2/2	33.58%	26.03%	3.22%	14.68%	0.10%	11.95%
2/3	18.97%	16.10%	4.61%	10.38%	0.05%	8.45%
3/1	2.88%	6.50%	2.83%	4.67%	1.67%	4.06%
3/2	0.77%	1.86%	0.21%	1.04%	0.19%	0.87%
4	4.09%	4.35%	1.37%	2.87%	1.00%	2.49%
5	0.40%	0.57%	0.07%	0.32%	0.00%	0.26%
6	5.12%	5.69%	3.14%	4.42%	0.09%	3.61%
7	0.08%	0.15%	0.04%	0.10%	0.03%	0.08%
Subtotal	100.00%	100.00%	82.21%	91.15%	87.91%	87.96%
8/1						2.94%
8/2			17.79%	8.85%	12.09%	9.10%
Total			100.00%	100.00%	100.00%	100.00%

Table 9: The distribution of the defense budget among budgetary titles/subtitles

The relation between the number of personnel and the expenditures on personnel would be an interesting subject for analysis. As Table 9 shows, the number of personnel working for Land Forces or the Air Force together amounts to 52.55 percent of the total number of defense personnel, in other words approximately half of the employees are involved in administrative and supporting tasks. The share of the Land Forces and the Air Force within expenditures on personnel, on the contrary is only 42.13 percent, while the MoD, the agencies and background organizations of the MoD, the Military Intelligence Agency, the Military Security Agency and the Governmental Bureau of Frequency Management have double share within expenditures on personnel than within the number of personnel.

Subtitles 1/3 and 2/1 spent 64.23 percent of the material expenditures, most of which belongs to the scope of central management. By adding the 17.79 percent of the material expenditures managed at MoD level, at first sight we can estimate the centralization of material expenditures to be at 82 percent. As for the capital budget, subtitles 1/3 and 2/1 dispose over the 80 percent of the total capital budget, while 12 percent of the capital budget is managed at MoD level.

To obtain a more precise figure, I analyzed the budgetary report of the MoD for 2003, which specifies the sum spent within the system of central management (see in Table 10).

Title/ subtitle	1. Total expenditure	2. Salaries	3. Social security	4. Other central expenditure	5. Institutional expenditure (1-2-3-4)
1/1	11 210.6	5 659.9	1 750.2	2 435.0	1 365.5
1/2	4 844.3	2 405.6	694.1	1 196.7	547.9
1/3	51 517.5	6 369.2	1 682.4	40 684.3	2 781.6
2/1	108 387.3	24 069.3	6 917.2	72 253.6	5 147.2
2/2	37 417.1	25 863.5	7 422.5	0	4 131.1
2/3	26 448.0	15 777.7	4 808.4	0	5 861.9
3/1	12 717.4	6 463.4	1 842.9	0	4 411.1
3/2	2 733.2	1 818.4	562.4	0	352.4
4	7 788.4	4 326.9	1 237.0	0	2 224.5
5	806.9	552.4	171.9	0	82.6
6	11 297.4	5 513.0	1 763.1	0	4 021.3
7	259.8	148.4	45.5	0	65.9
Total	275 427.9	98 967.7	28 897.6	116 569.6	30 993.0

Table 10: Central and institutional expenditures

The first column of Table 10 contains the total expenditure of each title. For the specification of institutional expenditures, we deduct central expenditures from total expenditures. Based on the verification of hypothesis H1, I consider the expenditures on salaries and social security as central expenditure, since the head of defense organization has virtually no influence on them.

The MoD Budgetary Management Information System applies different codes for central and institutional expenditures, but beyond those, I include the expenditures of some central tasks among central expenditures, if they were executed on behalf of other defense organizations. For example, the ministerial order on budgetary planning assigns the task of decreasing the environmental damages on polluted territories to the Department of Infrastructure, just as the renovation of military hospital, military barracks etc.

Table 10 has zero value in the central expenditure column for subtitle 2/2 and below. The reason behind it is that they do not provide inputs to other defense organizations¹³, but they are responsible for delivering some central tasks such as military education, health care etc.

The last column of Table 10 shows the institutional expenditures, i.e. the expenditures over which the head of defense organization can dispose. Disregarding the budgetary estimates managed at MoD level, the institutional budget is 11.25 percent of the total budget of titles 1-7. If the comparison extends to the total defense budget, the ratio decreases to 9.9 percent.

We can go further in obtaining a more precise ratio of centralization, if we take into account what was stated during the verification of hypothesis H1. We can correct our figure if we separate the expenditures on salaries (40.83 percent of the total budget) for expenditures over which the head of defense organization can dispose (bonus, salaries of civil servants and the deviation of basic salaries of military personnel and public servants from the amount set forth by law), and the centrally managed funds. This would decrease the ratio of centralization by 7.9 percent (to 82.2 percent from 90.1 percent).

H2.2. The central suppliers do not provide full-scale information on the prices of supplies in kind to the defense organizations.

To verify the hypothesis H2.2 I study the rules and regulations pertaining to the operation of central suppliers whether they order to provide information on the price of central supplies in kind. To collect the applicable rules and regulations I contacted the central supplier organizations in a letter. The rate of response was 100 percent,

¹³ As it is shown in Annex 1 for the MoD UK, the expenditures of for example the Zrínyi Miklós National Defense University could be allocated to defense organizations if we calculated the cost of education per person and used the number of students delegated by a certain organization to allocate the expenditures, but the Hungarian reality is quite far from that.

since I work for the organization that is responsible for coordinating the formulation of a performance measurement system, so I asked for the information officially, and only my secondary objective was to use it for research purposes.

I will include in institutional expenditures the centrally managed funds about which the central suppliers provide information. To qualify for the central expenditures category each item should meet two requirements: it is spent by the central supplier on behalf of other defense organizations and the central supplier does not provide information on expenditures to the defense organization.

In this way it can be seen what percentage of the total defense budget depend on the heads of those defense organizations that are not central suppliers. The importance of this lies in the fact that the head of a central supplier organization can be held accountable only on economy, but not on the efficient use of supplies in kind.

As for subtitle 1/1, among the central expenditures we can find funds for supporting sport clubs, prevention of nuclear accidents, renovation of military hospitals etc. Some of these items could be allocated to the end user organizations e.g. the renovation of military hospitals to title 6, but currently there is no rule for providing information on these central expenditures.

The budget of subtitle 1/2 consists of such central items as insurance on personnel and on assets, the payment for the Hungarian Railways for providing special tariffs on trains for military personnel, the medical examination of conscripts, training abroad, the cost of new service ID cards etc. We can also say, that items related to personnel could be easily allocated to defense organizations on behalf of which the money was spent, but there is no rule for providing information to other defense organizations.

The main central expenditure of subtitle 1/3 is the infrastructural budget (the central procurement of maintenance services, central reconstruction of barracks, renovations etc.). The vast majority of buildings, installations etc. belonging to the defense portfolio are maintained and operated by a business enterprise, according to a contract which sets the price by defense organizations, but there is no rule on providing this information to them.

As for subtitle 2/1, it disposes over the highest amount of central expenditures, because the Joint Logistic and Support Command plans and manages the logistic budget of HDF. Different rules apply to the fixed assets procured from this budget and to the stocks. Since the fixed assets are registered individually, the central supplier has to hand over an identification sheet to the defense organization, which among other things records the price of the asset. This means that the central suppliers provide information on assets delivered, but the defense organizations have no information system to collect, summarize or analyze this information. In other words, the price data on assets is available, but it is not used for decision-making. In the case of stocks, there is no regulation to provide information on their price.

In summary to support my position on hypothesis H2:

I have found hypothesis H2.1 to be correct, because more than 80 percent of the defense budget is managed centrally.

Finding also support hypothesis H2.1, because only the central suppliers belonging to the Joint Logistic and Support Command provide information to defense organizations about centrally managed expenditures, but only on the price of fixed assets. In addition to that, defense organizations do not have an information system in place to analyze or use this information in decision-making.

Through the verification of hypothesis H2 we can see that the introduction of an output measurement system is insufficient to solve the problem of measuring efficiency, changes are indispensable in the management system to harmonize the system of measuring expenditures on input with the requirements of performance measurement.

10.2. The obstacles of measuring effectiveness

International experience shows that in the countries where the regulations and administrative rules in force do not make the measurement of efficiency possible, they use public surveys to measure effectiveness.

In my opinion, this is not an appropriate way of measuring the effectiveness of the defense portfolio, because the citizens do not have an insight into the activities of defense organizations. In the case of some public services such as education or health care it might be satisfactory to measure the public opinion, since the majority of the citizens or a member of their family has first hand experience about those services. Some authors doubt the adequacy of this method even in the case of the latter public services, because the public cannot judge the professional quality of the service, only some less important factors such as the time of waiting, the atmosphere, the attentiveness of personnel etc.

Hungary switched from the system of conscription to the establishment of professional Defense Forces. In the system of conscription, many citizens had experience about the performance of defense, but it cannot be the basis for the annual measurement of effectiveness, since those experiences date back many years.

In the case of professional Defense Forces, the number of citizens who have experience in defense is insignificant, that is why I assume that the public opinion is not based on experience, it is rather determined by the media.

H3. The public opinion about defense is influenced by the information received from the media, therefore public surveys are inappropriate to measure the effectiveness of defense organizations.

I will also prove this hypothesis in two steps; first I identify the ratio of those who have first hand experience on defense, i.e. citizens in the family of whom there is a professional, a contracted or a conscripted soldier. After this I determine and analyze the significant differences in the opinion of people with defense experience and all the rest.

I consider it important to examine this question, because I believe that an unfavorable result of public survey would not necessarily cause any changes in the operation of defense organizations, the public opinion could be influenced by a better media strategy.

To verify this hypothesis I conduct the analysis of a public survey ordered by the MoD. I had the database of this survey and the survey questionnaire (the studied questions of the survey are enclosed in Annex 5).

The survey was conducted between 21 November and 4 December 2003, the pollsters asked the citizens above the age of 18 in Budapest and in 121 other settlements. The 1000 citizens were chosen by random sampling while the settlements by layered random sampling. The sample represents the Hungarian population by age, sex and type of settlement.

The questionnaire touched upon several topics, but the questions analyzed in this thesis are: B1.4, BZ2.2, H2, F2, N7, N12, P5, P6, M1, A0, A1, A2, A3. These questions provide information besides demographic details on the source of defense related information and on the view on defense.

H3.1. The majority of the Hungarian population does not have first hand experience (by themselves or through a family member or a relative) on defense.

To verify hypothesis H3.1, I analyzed the answers to question A.0, which measures if soldiers can be found in the family or among the friends of the individual. Thus we wish to count those individuals in the sample in the family or among the relatives of which there are professional, contracted or conscripted soldiers at the time of the survey.

I used the SPSS software to analyze the large database and the criteria for filtering was that the value of variable a01 or a02 or a03 or a04 should be 3 or higher than 3. The software selected 132 individuals of the 1000 for which the criteria was true, which means that in the families or among the relatives of about 13 percent of our sample we can find a soldier.

Considering that the sample was representative of the Hungarian population, we can accept hypothesis H3.1, since the vast majority (87 %) of the population does not have first hand experience about the operation of the Hungarian Defense Forces.

H3.2. The opinion of those, who have first hand experience about the operation of HDF is significantly different from the opinion of those who collect information from the media.

To verify hypothesis H3.2, I refined the analysis and to separate those individuals who form their opinion on the basis of experience and those who rely merely on media I set two requirements: they have to have soldiers in their family or among their relatives ($a01 \geq 3$ or $a02 \geq 3$ or $a03 \geq 3$ or $a04 \geq 3$), and they have to collect information about the Hungarian Defense Forces mostly personally or from relatives ($m1.6=1$ or $m1.7=1$). Only 48 individuals of 1000 fell into this category.

The software created a filter variable to separate the two groups. During the verification of this hypothesis we study whether the answers of the members of the two groups are different enough to declare that the source of information (experience in HDF or media) influence the opinion formed about the HDF. It means that we run a one-way analysis of variances (ANOVA) between each studied question of the questionnaire and the filter variable. This thesis does not aim to explore all the variables that have influence on the public opinion about the HDF, the sole purpose is to reveal the correlation between the source of information and the opinion.

To decide whether the answers are “different enough” the ANOVA method uses the sum of squares, which is divided into deviation between groups and within groups. The sum of squares within group expresses the heterogeneity within the group, i.e. how different the members of the group are compared to the group mean. The group means are also different from the mean describing the entire sample, which determines the sum of squares between groups. If we divide the sum of squares between groups and the total sum of squares, we can see how well our model explains the heterogeneity of the sample (Babbie, 2000.)

The SPSS uses the F test, i.e. it compares the variances (the sum of squares/degree of freedom), to decide whether the group means are different enough to assume the correlation (Székelyi-Barna, 2002.).

For each ANOVA my hypothesis H_0 is that the two variables are independent, i.e. the opinion does not depend on the source of information. I wish to set it at 5 % level of significance, thus I declare my hypothesis of independence to be correct if the Sig. column of the ANOVA table (see in Annex 6) contains a value of over 0,05. In every other case we can be 95 percent sure that the answer to the given question

was influenced by the source of information. Those questions are B1.4, BZ2.2, H2, N12, P6.1.

If we analyze the group means of the above-mentioned questions we can see that those who have experience trust the HDF more, support the transition to professional forces, support the increase of defense budget, and think of the HDF as an important national institution the officers of which are well trained, but its armament and military technology is in the need for development.

From these results, we can draw a conclusion about the success of the media strategy of the MoD. For example the support of developing the armament of the HDF within the group that has first hand experience shows that they have a more pessimistic (and unfortunately most probably more realistic) picture of the HDF, that's why they would increase the spending on this area. We could frame it that the media was successful in covering the problematic areas of defense, whereas this "success" involves the decrease of public support for increasing the defense budget.

In summary to support my position on hypothesis H3:

I have found hypothesis H3.1 to be correct, because the 87 percent of the Hungarian population does not have first hand experience about the operation of the Hungarian Defense Forces.

During the verification of hypothesis H3.2. it became clear in the majority of cases that the source of information resulted in a difference in opinion, but on the other hand there were questions where this influence could not be revealed. Despite this we can accept the statement that in most cases (for more than half of the questions) the media distorts the judgment of effectiveness, thus the public survey is not an appropriate way of the annual measurement of organizational effectiveness.

The HDF have no comprehensive performance evaluation, which of course does not mean that the defense organizations operate without any external control on performance. It only means that there is no uniform methodology for evaluation and there are no comprehensive reports on performance.

In the case of units assigned to NATO, there are uniform performance measurements – Operational Evaluation (OPEVAL) for the Land Forces and Tactical Evaluation (TACEVAL) for the Air Forces. During these evaluations, they check whether a battalion can deploy to the theatre of operation within its reaction time and defend itself until the battle starts.

In my opinion this evaluation methodology could be extended to the units that will not participate in any allied operations, and it could be developed further to measure the capabilities of the units to win a battle, not only to deploy to the theatre of operation.

11. Summary

The subject of this thesis came to the center of interest in the past few years both in the international and the national arena. The increased attention of taxpayers vis-à-vis public finances and the shrinking amount of budgetary resources triggered the changes in attitudes, and besides the legal use of public funds new requirements emerged to assure economy, efficiency and effectiveness in the public sector.

The Hungarian regulations pertaining to budgetary organizations were supplemented with the new requirement of performance measurement, but there was no analysis conducted to identify whether the current framework of budgetary management makes it possible to meet the new requirements. My thesis aimed to fill this gap and after discussing relevant international literature and the experiences of countries leading in public sector reform, I studied the existence of necessary conditions of performance measurement at one of the major players of the Hungarian public administration, the Hungarian Defense Forces.

I pointed out, that the Hungarian regulations literally were just supplemented with the requirement of performance measurement, thus a new rule appeared in the input based management system, which requires an output focused management.

With the verification of hypothesis H1. I shed light on the contradiction of the regulations pertaining to expenditures on personnel and the requirement of performance management. Namely, the heads of defense organizations cannot be held accountable on the efficient use of expenditures on personnel, because they have virtually no influence on it.

Hypothesis H2 aimed to demonstrate that the necessary conditions for measuring the efficiency of defense organizations are currently missing in the HDF.

There is no system in place to measure the outputs, while the system of recording the use of inputs is inappropriate to provide information for performance measurement purposes.

Hypothesis H3 turned to the study of the relation between organizational effectiveness and the conclusions that can be drawn from public surveys. I used the method of analysis of variances to show that even in the case of conscription Defense Forces the media has considerable influence on public opinion. Public surveys cannot be appropriate and exclusive methods to measure the effectiveness of defense organizations annually, because with the transition to all voluntary Defense Forces, the number of citizens who have first hand experience about the operation of HDF is decreasing, hence the influence of the media increases.

My hypotheses focused on the crucial conditions of performance measurement, but the calculation of efficiency indicators in itself would not bring any improvements in management. In other word, the implementation of performance measurement is not enough, performance management is required, where the undesirable value of efficiency indicators has its consequences both at individual and at organizational level.

In summary, the conditions for performance measurement in public administration are missing, and it is needless to create them until the management system remains the same, and no consequences are attached to performance indicators. The changes in public sector management are inevitable, and a comprehensive reform program should cover the following areas:

- strategic approach in management;
- loosening of administrative regulations;

- accountability of managers on performance and harmonized rules of employment;
- performance measurement and performance audit;
- transition to accruals accounting.

With a comprehensive public administration reform the performance measurement would not be the end in itself, but with the consequences attached to the indicators would facilitate the better management of public funds and public assets.

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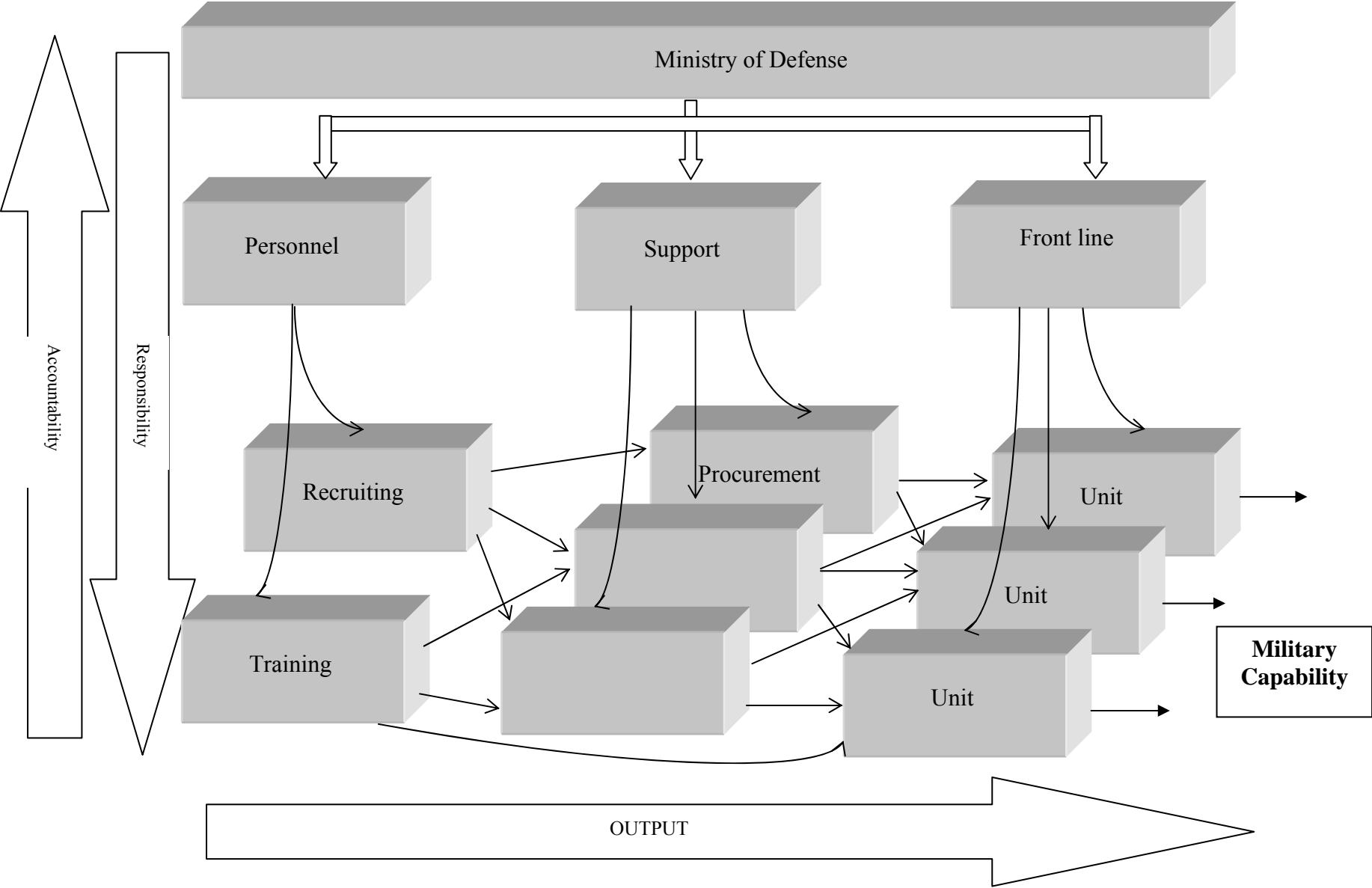
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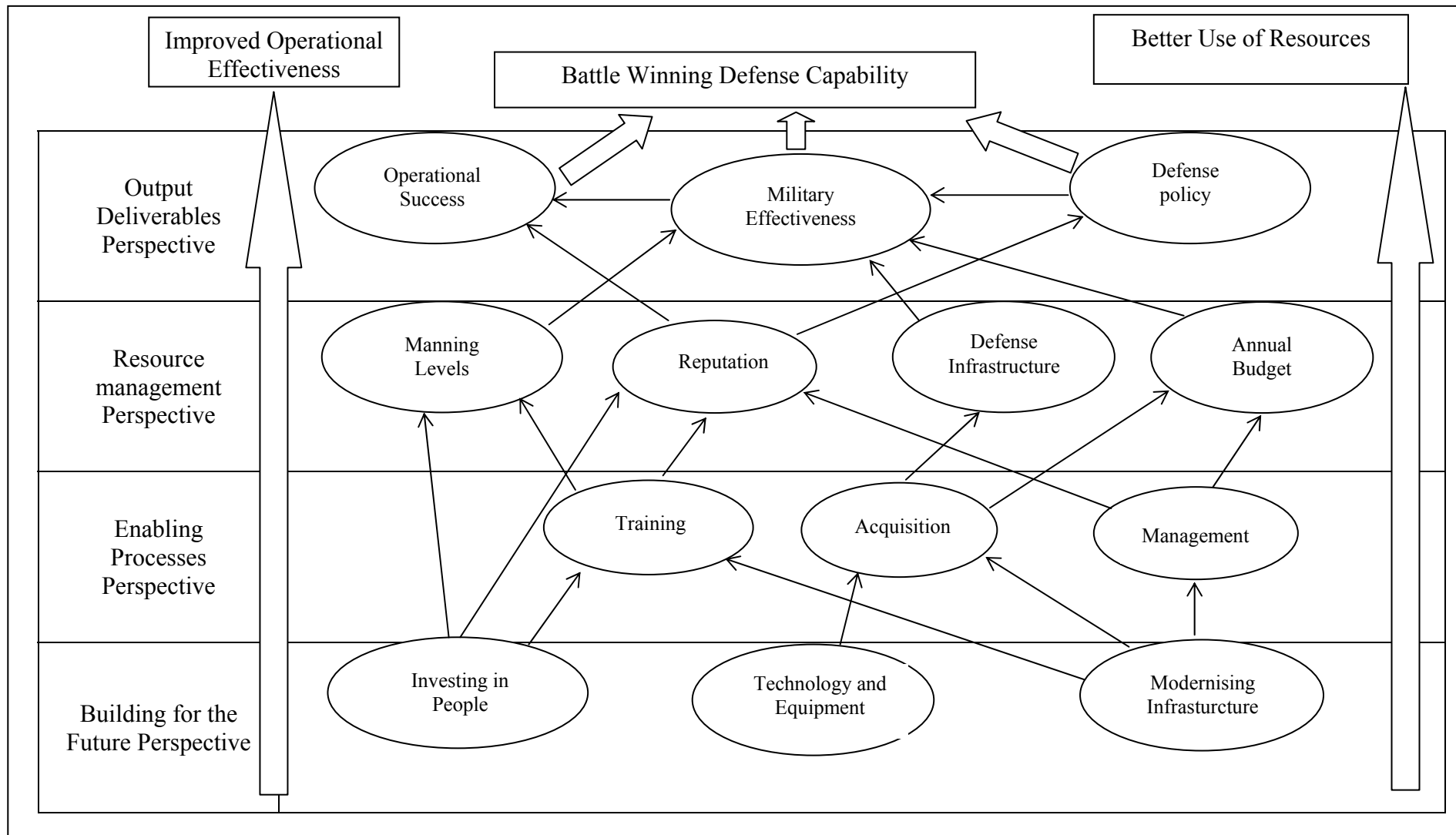
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Annex 1: The Departmental Financial Management System in the UK



Source: Ryan, 2004.

Annex 2: The Strategy Map of the Ministry of Defense in the UK



Source: Hally, 2004.

Annex 3: The comparison of public sector salary system

Salary component	Military personnel	Public servants	Civil servants
Basic salary	Based on assignment and rank	Based on assignment classes	Based on payment classes
Possibility of exception	On the basis of the „judgment” of the commander +20%	„Based on performance evaluation” the head of organization can decide +/- 20% (change to the previous max. 20%).	Not possible, but in the case of outstanding performance the waiting period for the next payment class can be decreased by 1 year in each category
Salary supplement	10-50% depending on the position of the organization in the hierarchy and on the level of education.	10-80% depending on the organization and on education.	Payable on the basis of law or a contract with the employee.
Salary allowances:			
1. Allowance for managers	5-50% depending on the assignment	10-65% depending on management level	100-300 % depending on management level
2. Allowance on foreign languages	10-100% depending on the language and the level of certificate max. 200%	15-100% depending on the language and the level of certificate	50-100% depending on the level of certificate
3. Allowance on higher education	The minister can give it for doctoral title or for special training	30-75% determined by the head of organization for doctoral title or special training. The assignments qualifying for it should be defined.	5-10% if the education of the employee exceeds the necessary level and uses it for the job in min. 10% of the working time
Miscellaneous allowances	Allowance in health hazardous assignments 45%	Allowance in health hazardous assignments 45%	Allowance in health hazardous assignments and for the permanent use of protective equipment 100%

	Drivers allowance 13%	Drivers allowance 13%	The minister can establish other allowances based on the special characteristics of the profession. If the law does not set forth the highest and the lowest value of allowance, the amount of allowance can be increased.
	0,5 and 1% per hour in the afternoon and at night in military hospitals	Night allowance per hour 0,14%	
	Allowance for pilots – 360-2500% depending on how experienced the pilot is and how complicated the tasks were		
	Allowance for test pilots: 23-31%/ aircraft		
	Allowance for parachutists: 4,2-34% depending on the number and difficulty of jumps		
	Allowance for parachute testing 23-31% depending on type		
	Allowance for ordnance disposal experts: 2,9-9,2% per hour		
	Divers allowance 2,6-3,5% per hour		
	Allowance for readiness 6,3% per day		
	Allowance for duty: 3,8-7,4% per duty		
	Allowance for exercise 7,4% per day		
	Allowance for duty for doctors 0,45-4,5% per hour		

	Allowance for surveyors 4,2-8,4% per day		
	Allowance on flying experience 6,3-37,5% per month		
	Allowance for senior pilots 11,3-16,5% per month		
	Allowance for ground support of aircrafts 20% per month		
	Allowance on special employment 50-100%		
	Allowance for instructors: 26-260% depending on experience		
	Sanitary allowance 15-80%		
Other benefits ¹⁴	Bonus on service time	Bonus on service time	Bonus on service time
	Recognition for permanently fulfilling the duties with high standards, or in the case of outstanding performance (gift, bonus, holiday, souvenir, medal, decoration)	Recognition for permanently fulfilling the duties with high standards, or in the case of outstanding performance (gift, bonus, holiday, souvenir)	Supplement per months can be paid for meeting a predefined performance standard or encouraging temporary fulfillment of extra duty
	Bonus for the permanent and effective accomplishment of duties. Not higher than the 6 months salary of the individual.	Supplement for life and pension insurance	Bonus for permanently outstanding performance

¹⁴ In the case of public servants the amount of the benefits and the conditions for paying it, except for the recreation support, are set forth by the head of the organization.

	Supplies in kind (arms, equipment, uniform, catering)	The higher from work clothes or the 200% of reimbursement on clothes	Work clothes, uniforms
	Meal supplement	Meal supplement	
	Public transport supplement	Public transport supplement	
	Housing supplement	Supplement for housing, building or buying a flat or a house	
	Rental fee supplement	Rental fee supplement	
	Recreation support (to family members, too)	Recreation support 75-100%	
	Aid for newly weds	Aid for newly weds	
	Social aid	Social aid	
	Scholarship, support of education	Scholarship, support of education and language learning	

One month salary is due to everyone who is employed on 1 January.

Annex 4: The expenditures of the Hungarian Ministry of Defense in 2003

In Million HUF

Title/Subtitle	Personnel (person)	1. Salaries	2. Social security	3. Material expenses	4. Other	5. Operational budget (1+2+3+4)	6. Capital budget	7. Total Expenses (5+6)
1/1. Ministry of Defense	930	5 659,9	1 750,2	1 406,9	142,8	8 959,8	2 250,8	11 210,6
1/2. MoD Agencies	484	2 405,6	694,1	1 254,2	351,5	4 705,4	138,9	4 844,3
1/3. MoD Background organizations	1559	6 369,2	1 682,4	31 958,5	165,3	40 175,4	11 342,1	51 517,5
2/1. General Staff and its subordinates	11193	24 069,3	6 917,2	48 990,9	219,3	80 196,7	28 190,6	108 387,3
2/2. Land Forces	13943	25 863,5	7 422,5	3 916,9	164,7	37 367,6	49,5	37 417,1
2/3. Air Force and air defense	7877	15 777,7	4 808,4	5 721,4	116,2	26 423,7	24,3	26 448,0
3/1. Military Intelligence Agency	1196	6 463,4	1 842,9	3 564,7	22,8	11 893,8	823,6	12 717,4
3/2. Military Security Agency	321	1 818,4	562,4	252,9	7,1	2 640,8	92,4	2 733,2
4. Zrínyi Miklós National Defense University	1699	4 326,9	1 237,0	1 717,1	13,9	7 294,9	493,5	7 788,4
5. Military prosecutors	167	552,4	171,9	79,8	2,8	806,9	0,0	806,9
6. Military hospitals	2125	5 513,0	1 763,1	3 942,3	34,8	11 253,2	44,2	11 297,4
7. Governmental Bureau of Frequency Management	32	148,4	45,5	52,2	0,5	246,6	13,2	259,8
Total	41526	98 967,7	28 897,6	102 857,8	1 241,7	231 964,8	43 463,1	275 427,9
8/1. Estimates managed at MoD level – Investments	0	0	0	0	0	0	0	9 200,0
8/2. Estimates managed at MoD level – Central programs	0	0	0	3,0	22 529,2	22 532,2	5 977,3	28 509,5
MoD Total	41526	98 967,7	28 897,6	102 860,8	23 770,9	254 497,0	49 440,4	313 137,4

Annex 5: Survey questionnaire

Public Survey on the Hungarian Defense Forces

November 2003.

The survey is conducted by Echo Survey Sociological Research Center on behalf of MoD Zrínyi Communication Kht. The sample consists of the random sample of Hungarian citizens above the age of 18. The data is classified and response is voluntary!

KEY

1

2

3

4

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☐ 2

2003. Month:	Day:	Hour:	
Pollster:			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 3
Settlement:			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 4
Code:			<input type="checkbox"/> <input type="checkbox"/> 5
Type of settlement:			<input type="checkbox"/> 6
<div>1 – Budapest 2 – County center, city 3 – other town 4 – village</div>			
County:			<input type="checkbox"/> <input type="checkbox"/> 7
<div>01 - Budapest 06 - Csongrád 11 - J.-N.-Szolnok 16 - Szabolcs-Sz.-B. 02 - Baranya 07 - Fejér 12 - Komárom-E. 17 - Tolna 03 - Bács-Kiskun 08 - Győr-M.-S. 13 - Nógrád 18 - Vas 04 - Békés 09 - Hajdú-Bihar 14 - Pest 19 - Veszprém 05 - Borsod -A.-Z. 10 - Heves 15 - Somogy 20 - Zala</div>			

Please sign this statement!

I declare, that I prepared the interview according to the regulations with the individuals chosen according to the rules of random sampling. I checked the coding and I kept all the rules and instructions!

Signature

B1. How much are you interested in....?

	completely	to a certain extent	not really	not at all	NT=0 NV=X	
1. world politics	4	3	2	1	0 X	9
2. national politics	4	3	2	1	0 X	10
3. business news	4	3	2	1	0 X	11
4. information on defense	4	3	2	1	0 X	12
5. information on armed conflicts	4	3	2	1	0 X	13
6. European Union	4	3	2	1	0 X	14
7. sport event	4	3	2	1	0 X	15
8. police news	4	3	2	1	0 X	16

BZ2. I will mention organizations, institutions. Please, tell me how much you trust them. You need to give a mark as in the school from 1 to 5. One means that you do not trust them at all, while 5 means that you trust them completely.
How much do you trust...

	completely (5)	(4)	(3)	(2)	Not at all (1)	NT	NV	
1.border guards	5	4	3	2	1	0	X	17
2. Hungarian Defense Forces	5	4	3	2	1	0	X	18
3. police	5	4	3	2	1	0	X	19
4. prosecutors	5	4	3	2	1	0	X	20
5. newspapers, Hungarian press	5	4	3	2	1	0	X	21
6. commercial radios	5	4	3	2	1	0	X	22
7. Hungarian Radio	5	4	3	2	1	0	X	23
8. commercial TVs (TV2, RTL klub)	5	4	3	2	1	0	X	24
9. Hungarian Television (MTV)	5	4	3	2	1	0	X	25
10.municipalities	5	4	3	2	1	0	X	26
11. Constitutional Court	5	4	3	2	1	0	X	27
12. churches	5	4	3	2	1	0	X	28
13. Hungarian government	5	4	3	2	1	0	X	29
14. Parliament	5	4	3	2	1	0	X	30
15. courts	5	4	3	2	1	0	X	31
16. trade unions	5	4	3	2	1	0	X	32
17. the president	5	4	3	2	1	0	X	33
18. associations, foundations	5	4	3	2	1	0	X	34
19. European Union	5	4	3	2	1	0	X	35
20.Ministry of Defense	5	4	3	2	1	0	X	36

H2. Do you agree or disagree with the decision that the Hungarian Defense Forces by the end of 2005 will exclusively consist of volunteers, i. e. contracted and professional soldiers.

1 – agree

2 – do not agree

0 – do not know

X – no answer



68

GIVE THE INDIVIDUAL THE ANSWER SHEET 1.

F2. Let's suppose that you have to decide on the funds available for the development of the Hungarian Defense Forces. If you had 1000 forints, how much would you spend on the following purposes?

	The sum in forints	9999 - NT XXXX - NV	
1. increase the salary of the soldiers		9999 XXXX	69
2. renovation of barracks			70
3. military cultural centers			71
4. increasing the number of contracted soldiers			72
5. procurement of up-to-date armaments			73
6. better military training			74
Total:	1000 Ft.		

N7. In your opinion, how important institution is the Hungarian Defense Forces? 4 – very important 3 – rather important 2 – rather not important, or 1 – not important at all 0 – do not know X – no answer	<input type="checkbox"/> 111
N12. Would you support a government decision to spend more on the defense of the country? 4 – completely 3 – rather yes 2 – rather not 1 – not at all 0 – do not know X – no answer	<input type="checkbox"/> 122

P5. Did you perform military service? 1 – yes 2 – yes, but as a conscientious objector 3 – no 4 – the question does not apply (e.g. women, disabled) X – no answer	<input type="checkbox"/> 140
--	------------------------------

P6. In your opinion how true are the following statements for the Hungarian Defense Forces.

	complete ly	rather true	rather not	not at all	NT=0 NV=X	
1. It is an important national institution	4	3	2	1	0 X	141
2. The population trust it	4	3	2	1	0 X	142
3. Its officers are well trained	4	3	2	1	0 X	143
4. The military barracks are out-of-date	4	3	2	1	0 X	144
5. The armament and the military technology is in need of significant development	4	3	2	1	0 X	145
6. The military career is getting more and more acknowledged.	4	3	2	1	0 X	146
7. It is able to defend the country	4	3	2	1	0 X	147
8. It is able to defend the country in cooperation with NATO defense forces	4	3	2	1	0 X	148

GIVE THE INDIVIDUAL THE ANSWER SHEET 3.

M1. Mainly from which source of information do you learn about the Hungarian Defense Forces? Please, choose 3 of the following sources of information which you use the most often.

Now, please choose 3 from the rest of the sources, which you use the least often.

	most often	least often	did not choose it	NT = 0 NV = X	
1. Newspapers	1	2	3	0 X	162
2. Television	1	2	3	0 X	163
3. Radio	1	2	3	0 X	164
4. Internet	1	2	3	0 X	165
5. Military publications	1	2	3	0 X	166
6. Experience	1	2	3	0 X	167
7. Experience through family members	1	2	3	0 X	168
8. Through friends	1	2	3	0 X	169
9. Rumors	1	2	3	0 X	170

A0. Which is the closest circle in which we can find the following people?

	close family	relatives	friends	nowhere	NT=0 NV=X	
1. conscript	4	3	2	1	0 X	191
2. professional officer	4	3	2	1	0 X	192
3. professional NCO	4	3	2	1	0 X	193
4. contracted soldier	4	3	2	1	0 X	194
5. policeman	4	3	2	1	0 X	195
6. border guard	4	3	2	1	0 X	196

QUESTIONS ON DEMOGRAPHY

A1. Sex:		1 - Male 2 - Female	<input type="checkbox"/>	270
A2. Age?	 years	<input type="checkbox"/> <input type="checkbox"/>	271
A3. Highest education:		1 – less than elementary school 2 – elementary school 3 – skilled worker, 4 – grammar school 5 – degree (undergraduate, graduate) X – no answer	<input type="checkbox"/>	272

Annex 6: The influence of the source of information on public opinion

Variable		Sum of Squares	Degree of freedom	Mean square	F	Sig.
B1.4	Between groups	15,18	1	15,17824	20,61574	0,00
	Within groups	734,77	998	0,736245		
	Total	749,95	999			
BZ2.2	Between groups	15,02	1	15,0153	10,53876	0,00
	Within groups	1420,49	997	1,424769		
	Total	1435,51	998			
H2	Between groups	1,48	1	1,477868	4,664505	0,03
	Within groups	313,35	989	0,316833		
	Total	314,83	990			
F2.1	Between groups	1033,67	1	1033,671	0,042398	0,84
	Within groups	24112290,55	989	24380,48		
	Total	24113324,22	990			
F2.2	Between groups	10117,37	1	10117,37	0,509882	0,48
	Within groups	19624325,97	989	19842,59		
	Total	19634443,34	990			
F2.3	Between groups	2051,83	1	2051,828	0,395319	0,53
	Within groups	5091694,97	981	5190,311		
	Total	5093746,80	982			
F2.4	Between groups	31788,27	1	31788,27	1,703157	0,19
	Within groups	18216380,45	976	18664,32		
	Total	18248168,72	977			
F2.5	Between groups	23041,07	1	23041,07	1,135682	0,29
	Within groups	20024571,72	987	20288,32		
	Total	20047612,79	988			
F2.6	Between groups	51,17	1	51,16641	0,00216	0,96
	Within groups	23329481,36	985	23684,75		
	Total	23329532,52	986			
N7	Between groups	1,46	1	1,460986	2,272471	0,13
	Within groups	640,33	996	0,642906		
	Total	641,80	997			
N12	Between groups	6,74	1	6,740239	5,996969	0,01
	Within groups	1119,45	996	1,123941		
	Total	1126,19	997			
P6.1	Between groups	3,29	1	3,294974	5,043061	0,02
	Within groups	651,41	997	0,653368		
	Total	654,70	998			
P6.2	Between groups	0,94	1	0,941737	0,969887	0,32
	Within groups	969,03	998	0,970975		
	Total	969,98	999			
P6.3	Between groups	5,26	1	5,260286	4,527472	0,03
	Within groups	1159,54	998	1,161859		
	Total	1164,80	999			

Variable		Sum of Squares	Degree of Freedom	Mean square	F	Sig.
P6.4	Between groups	0,94	1	0,939441	0,738189	0,39
	Within groups	1270,08	998	1,27263		
	Total	1271,02	999			
P6.5	Between groups	5,33	1	5,331094	4,540284	0,03
	Within groups	1171,83	998	1,174176		
	Total	1177,16	999			
P6.6	Between groups	2,52	1	2,518601	2,120148	0,15
	Within groups	1185,56	998	1,187936		
	Total	1188,08	999			
P6.7	Between groups	0,34	1	0,34456	0,28511	0,59
	Within groups	1206,10	998	1,208516		
	Total	1206,44	999			
P6.8	Between groups	1,44	1	1,436611	1,488747	0,22
	Within groups	962,08	997	0,96498		
	Total	963,52	998			

Variable	Source	N	Mean
B1.4	Media	952	2,215336
	Experience	48	2,791667
	Total	1000	2,243
BZ2.2	Media	952	3,272059
	Experience	47	3,851064
	Total	999	3,299299
H2	Media	943	1,195122
	Experience	48	1,375
	Total	991	1,203835
F2.1	Media	943	177,5345
	Experience	48	182,2917
	Total	991	177,7649
F2.2	Media	943	173,6585
	Experience	48	188,5417
	Total	991	174,3794
F2.3	Media	936	70,03739
	Experience	47	76,80851
	Total	983	70,36114
F2.4	Media	931	117,0806
	Experience	47	90,42553
	Total	978	115,7996
F2.5	Media	941	167,2529
	Experience	48	144,7917
	Total	989	166,1628
F2.6	Media	940	173,1862
	Experience	47	174,2553
	Total	987	173,2371
N7	Media	950	3,133684
	Experience	48	3,3125
	Total	998	3,142285

Variable	Source	N	Mean
N12	Media	950	2,928421
	Experience	48	3,3125
	Total	998	2,946894
P6.1	Media	951	3,356467
	Experience	48	3,625
	Total	999	3,369369
P6.2	Media	952	2,898109
	Experience	48	3,041667
	Total	1000	2,905
P6.3	Media	952	2,785714
	Experience	48	3,125
	Total	1000	2,802
P6.4	Media	952	3,169118
	Experience	48	3,3125
	Total	1000	3,176
P6.5	Media	952	3,262605
	Experience	48	3,604167
	Total	1000	3,279
P6.6	Media	952	2,577731
	Experience	48	2,8125
	Total	1000	2,589
P6.7	Media	952	2,329832
	Experience	48	2,416667
	Total	1000	2,334
P6.8	Media	951	3,197687
	Experience	48	3,375
	Total	999	3,206206

