

ASSESSING THE IMPACT OF FEDERAL FUNDING TO SWISS UNIVERSITIES: A NEW PERFORMANCE AUDIT CONCEPT

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INTRODUCTION

Opportunities and risks must undergo careful assessments in order to survive in the world of globalization. This applies not only to the private but also to the public sector, including governmental, political and educational institutions. New control mechanisms must be developed and implemented to measure and monitor the performance of political programs. These tools primarily employ evaluation techniques and performance indicators. The need for such instruments is most acute in political programs and processes where large sums of money are involved, where little information is available about the recipients of monetary contributions and where significant public emotional involvement is apparent, such as in education, social security or public health issues.

Because the traditional compliance auditing is not sufficient to measure and monitor the performance of political programs, a new concept has been developed at the Office for Education and Science to allow a comprehensive performance audit of its university funding programs. Such an audit was an asked program for the parliamentary bodies, regarding their loud call for the application of modern information and monitoring instruments during their debates on the new University Funding Law.

The comprehensive performance audit concept allows us to assess the effectiveness, the efficiency and the appropriateness with respect to results, structures and processes of all the programs, that are regulated by the University Funding law. The University Funding law describes the allocation of federal subsidies and grants used to cover general operating expenses and costs related to the maintenance of

the physical plant and infrastructure as well as the contributions to some minor incentive programs in university teaching and education. The novelty of this performance audit concept has generated widespread awareness of the need for such an approach. Not only is there an interest in the effective use of federal funding, questions have also been raised about how these funds have influenced the direction and development of the university landscape in Switzerland.

BACKGROUND

The Twentieth Century is most notably characterized by continual economic growth, despite two world wars and the massive recessions linked to them. It was only at the end of the Sixties that this growth was interrupted regularly by phases of economic recession, to which the following has been attributed in recent years:

acceleration of technological change

globalization of the markets

competition among national production sites

tertiarization, or growth of the service sector, in the Western industrialized countries

Through the greater vulnerability of the industrialized nations from global networking (e.g. the capital markets), the realm for conflict has increased not only between society and economy, but also between economy and politics. The tertiarization of the industrialized nations and the gradual shift from a productivity-based society to a knowledge-based society brings with it a fundamental change. By forcing domestic economies to open up and build up new networks, interacting forces of a new complexity are created requiring managers and political decision makers to develop system thinking as a new core competence. This skill includes thinking in a larger context to make the causes and effects of complex

systems more transparent. In this respect, what we have are the typical functions normally consigned to what is traditionally termed "evaluation".

How weakly system thinking is developed in most people and how few people are in a position to master complex situations can be seen in an experiment carried out by Dörner.¹ He conducted a study with test persons using a computer simulation where they had the task of generating greater prosperity in a fictitious country. The test persons had the freedom to decide whether to invest in education, healthcare, security or ecology projects. The computer calculated the consequences of each intervention for the fictitious country. The experiment demonstrated clearly that practically none of the test persons was able to bring about a higher level of prosperity. On the contrary, in most cases, the test persons drove the country to the brink of economic disaster. Their serious misjudgments resulted from the fact that they tried to extrapolate the past linearly although it is well known that curves depicting growth and decline are exponential. In addition, the test persons concentrated on processing information from the past, which is practically meaningless for an assessment of dynamic systems and, in extreme situations, can lead to overlooking dangerous developments. When they realized that the standard of living in their city was continually on the decline, they tried to stabilize the situation with many small adjustments (treating the symptoms), which of course failed. Rather, the situation visibly deteriorated, because each correction caused an additional problem.

This example makes clear that complex systems - political programs - demand changed control mechanisms and an altered awareness in regard to the acquisition and processing of information.

Although these new developments in business and society did not take place yesterday, our society still does not have assessment measures, which would be suitable for overseeing the processes of complex systems such as are found in highly networked enterprises or in public administration. The traditional cost accounting concentrates primarily on production and does not deal with the service sector of a modern knowledge-based society or public administration, which requires a large portion of the gross national product in all industrialized countries. In other words, we often do not know how input and impact are connected or whether moneys expended are justified and the results useful.

Not only are administrative bodies aware of this unsatisfactory situation, but also increasingly parliamentary bodies, which more and more are calling loudly for the application of modern information and monitoring instruments such as auditing and evaluation or the general use of performance audits.

How strong parliament's will is to find application for the new monitoring instruments could be seen clearly during the debate last autumn on the new Swiss Federal Law on Universities Funding. In this context, the parliamentary commissions, which are responsible for preliminary hearings, insisted that at least all newly developed federal programs must be evaluated after one legislative period and that the evaluation reports must be published. For this reason, the Swiss Federal Office for Education and Science decided to develop a comprehensive model for evaluating its university funding programs. Performance audits for the research programs will be worked out in a second phase.

COMPREHENSIVE AUDIT PROCEDURES IN ADMINISTRATION: PERFORMANCE AUDITS IN ADDITION TO COMPLIANCE AUDITS

General Introduction

Investigations or tests generally serve to initialize a learning process and later to confirm or change the patterns of the participants, depending on the results.² In this sense, negative deviation should not be primarily understood as consigning blame (accusation) but rather as an opportunity for shared organizational learning. Private and public enterprises, which are dealing with a dynamic environment, are frequently subjected to control mechanisms, because restoring balance by making adjustments and corrections for existing irregularities is an on-going process.

In order to establish the necessary transparency between input and effects as mandated by New Public Management Concepts, further evaluation tools that measure the "administrative performance" and provide a legislative body with "a better prospect for monitoring and control" are needed in addition to the traditional compliance audits, such as checks on the spending of budgeted finances or fulfillment of required tasks. Furthermore, specific standards must be developed with which administrative performance can be tangibly measured and assessed. Such standards could be evaluated through a collaborative effort with professional auditing and accountancy organizations or the Federal Audit Office.

Performance Audits

Performance Audits are understood to be comprehensive results and systems audits. By systems audits, the checking of processes and structures is understood. In contrast to this, using an assessment of results allows the determination of all of the intended and unintended consequences of a political program.

If the checking is limited to results of products or results that derive directly from administrative acts, then we speak of simple results audits. If, however, all of the effects or consequences, i.e., the so-called outcomes and impacts, are included, then the term evaluation is used. The differentiation between results audit and evaluation is primarily the extent of the audit conducted and the technique applied. In traditional evaluations, sociological techniques play a dominant role.

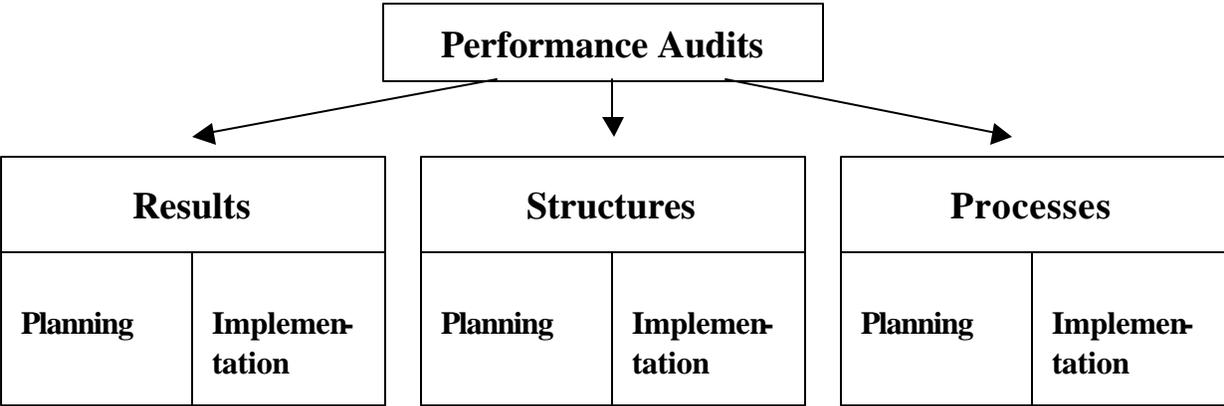
While output ³ provides information about the production of a specific administrative unit and thus can be immediately juxtaposed to the rendered administrative performance, outcome and impact are generally understood in relationship to the effect output has on society, industry and the environment, and therefore describe aggregate behavioral changes.

Outcome says something about the general effect of a program. In healthcare, for example, specific therapeutic treatments are of less interest than the number of trouble-free years resulting from it. In contrast to this, the impact describes the individual level, which provides information about a subjective perception and thus about individual behavioral changes. In healthcare, a specific therapy leads to an improvement of the health of the patient. The impact indicators relevant to this therapy are symptomatic of how well a patient will feel after a specific therapy or operation. Important here is the subjectively sensed improvement of his personal quality of life.

Auditors, individually, or as an independent or in-house institution, mainly include or check the direct and immediate effects as part of a comprehensive performance audit, whereas an evaluation committee will

place greater focus on the indirect and consequential effects. Thus, it is clear that complex results audits must fall within the realm of an evaluation.

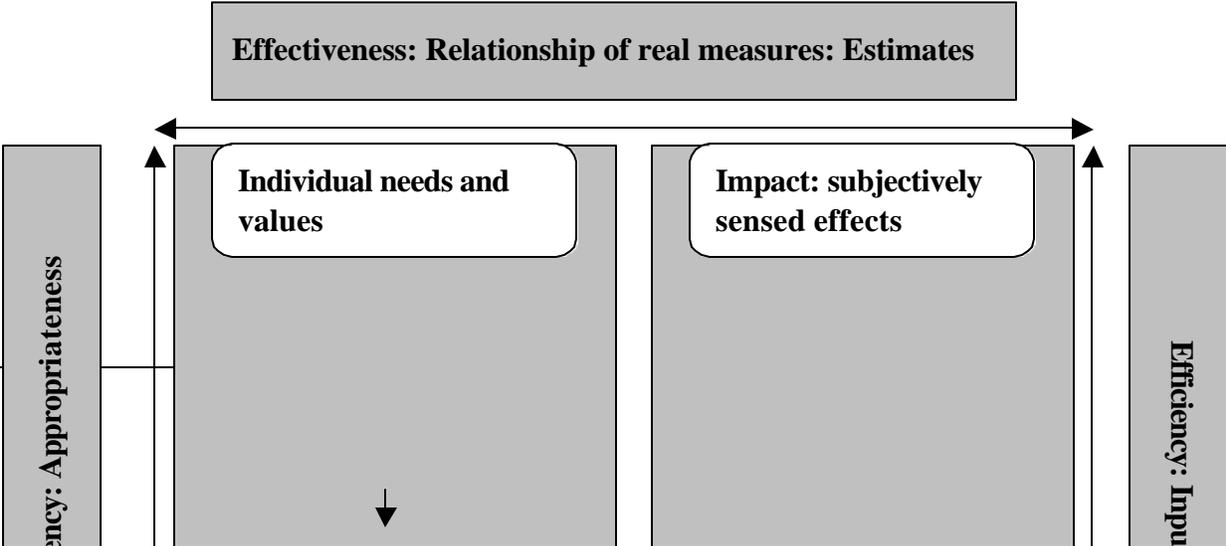
Figure 1: An overview of performance audits

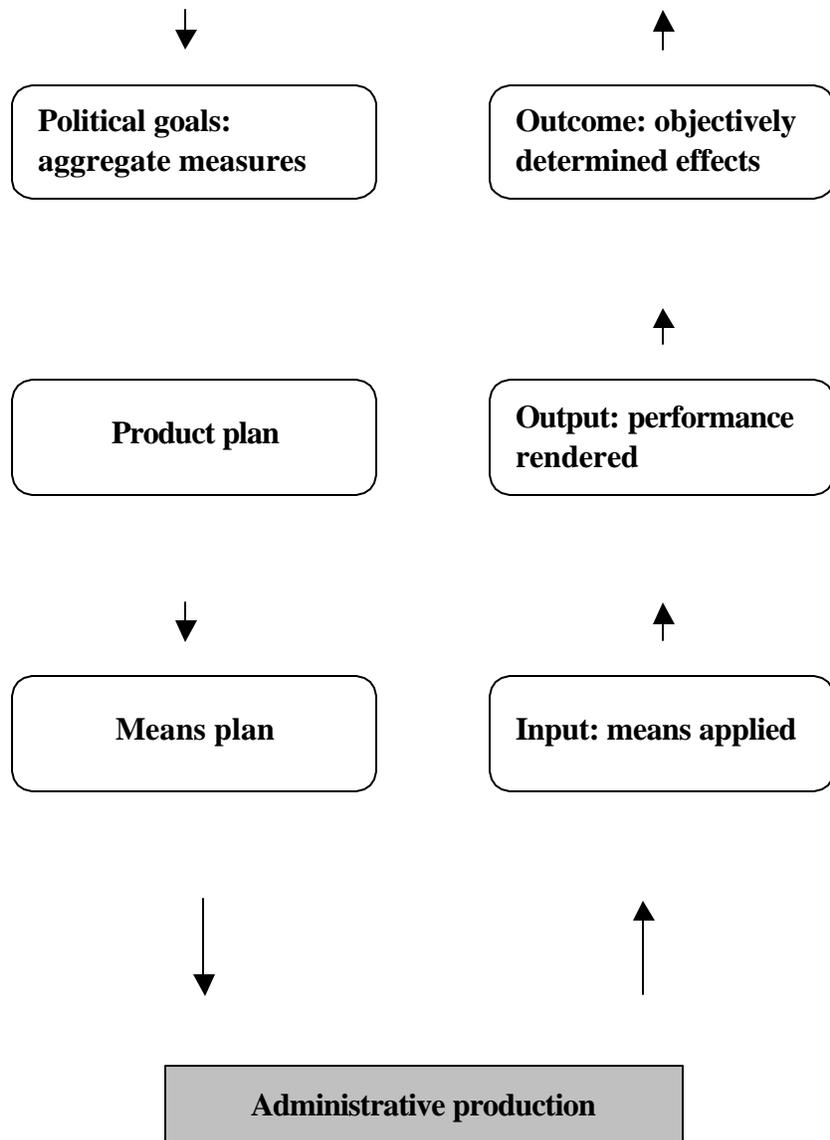


All performance audits can basically be divided into two parts, planning and execution (see figure 1), irrespective of whether these concern results, structures or processes. Various tests based on these differing levels are possible that can be subsumed under the headings efficiency, economy or fiscal responsibility, effectiveness and appropriateness. In figure 2, both the "planning" and the "administrative

production" processes of a political program are shown.⁴ The model is based on the assumption that a political program is set as a consequence of a public need or concern. This concern leads to planned objectives as well as to product and resources plans. Inside the administration, these resources are used up in the administrative production process and a number of products, activities or services are produced, which have certain effects on the environment and the citizens. For a performance audit, which includes the planning side, one is really dealing with an ex ante evaluation, whereas the right side describes an ex post evaluation or implementation check.

Figure 2: Test criteria in conjunction with the planning and production process





For economy, efficiency, effectiveness and appropriateness, the following definitions apply:

Economy or fiscal responsibility describes the relationship between real and estimated costs. Performance is fiscally responsible if it is executed in a "reasonable cost" manner when measured against a given standard.

Efficiency describes the relationship between the input and output measures of a production process.

Effectiveness describes the relationship between targeted and achieved in terms of goals. Therefore, it says something about the degree of achieved targeted goal.

Appropriateness refers to the sum of all resources and strategies needed to achieve a political goal and satisfy the needs of an envisioned population group.

Economy: The term fiscal responsibility in its narrow sense corresponds to the previous definition. Economy or fiscal responsibility, in the broader sense, however, refers to efficient as well as effective implementation. In this sense, a task is successfully completed only if the correct things (effectiveness) are correctly done (efficiency). It is entirely possible that one administrative department works very effectively but with very high costs, while another very efficiently provides services that are no longer called for. In order to check fiscal responsibility, a standard cost-effectiveness accounting with quantitative and qualitative performance benchmarks is required.

Thrift⁵ is a term often used in conjunction with economy. This term finds its origins in finance and means nothing other than expense-oriented cost-cutting measure. Thus, thrift is a concomitant part of the principle of fiscal responsibility and is still retained as an historic relict in numerous statutes.

In various references, one finds, next to the term effect or result, the term efficacy as well. Efficacy is defined as the relationships between output to standard costs or outcome to standard costs.

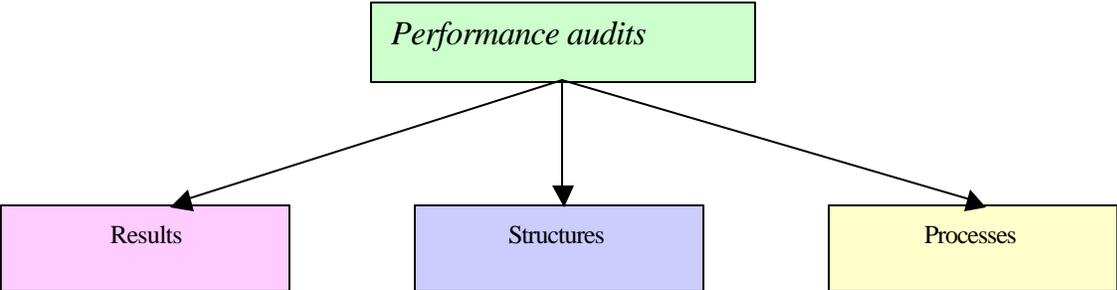
Efficiency: Very generally, the term efficiency deals with input-output relationships, while effectiveness has to do with comparisons what was planned and what actually is. Both terms can be applied on different levels in the administrative production process described in fig. 2.

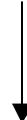
Effectiveness: Effectiveness⁶ audits are checks, which provide a statement of the level of goal achievement in a process. In essence, they are a control of results and effects. The traditional and most commonly applied effectiveness audits are based on a comparison of what was planned and what actually resulted. In effectiveness audits, both the forecast level of goal achievement and external consequences play a role. Proof of effectiveness is thus founded on a normative comparison of estimated and reached goals. Effectiveness audits belong to the most demanding tests, since established goals are often only expressed in a qualitative and descriptive form and first must be made operational through suitable performance indicators.⁷ Various techniques from the field of operations research could be applied, among them methods used in a cost-effectiveness analysis or value-benefit analysis. In some countries (Canada and Ireland), there is no legal provision for effectiveness audits. In other countries, such as the United States, Germany and Switzerland, on the other hand, effectiveness audits are gaining more widespread acceptance.

Appropriateness: In conjunction with the appropriateness of a program or a specific measure, the performance auditor examines whether the targets could not have been another strategy or whether a specific program used to achieve a specific goal was adequately conducted. This examines, in concrete terms, whether sufficient resources (financial, human, or infrastructure) were devoted to this specific program. The administration could vary strategies and instruments through an *ex ante* evaluation and list alternatives for the governing or legislative body. Time and again, in the course of discussions about the appropriateness of a political program, the demand is made that performance should serve to assess the adequacy of political goals. Given the distribution of power in a constitutional state, this is an undertaking fraught with problems. While legislative or governing bodies have the task of establishing the goals for political programs, it is the responsibility of the administrative bodies to carry these out. The administration has to examine them critically throughout the process, and keep the legislative and governing bodies informed of the level of goal achievement or, if necessary, possible incompatibilities between goals established and program implementation.

A synopsis of a comprehensive performance audit is shown in figure 3. This illustrates all test levels that could be relevant to a political program.

Figure 3: Synopsis of performance audits





Compliance Audits

The classical compliance audits are above all formal tests. An investigation is made of whether certain facts or an examined object conforms to the legal regulations or instructions given by a superior authority. The legality of the procedures is meant to prevent inconsistency and provides citizens with a legal title of sorts, through which they can assert their rights over the administration. The following points could be emphasized in an audit:

organizational structure (corresponds the structure to the legal requirements?).

procedure guidelines linked to the use of resources (contract and subsidy procedures, selection criteria, procedural transparency).

program execution (does the program match the program laid out or were changes made?).
internal control system that should guarantee standards compliance (budget procedures, bank account and asset record keeping).

AN OVERVIEW OF THE MOST IMPORTANT INVESTIGATION PROCEDURES: AUDITING, MANAGEMENT CONTROL AND EVALUATION

On the basis of the law and from the literature on economics and sociology, three investigation procedures can be differentiated. Corporate law provides the term "audit", "management control" comes from the realm of business administration, and sociology contributed the term "evaluation".

To summarize briefly, evaluation is intended for rather long-term studies on difficult to investigate consequences, whereas an external audit checks the functionality of internal monitoring and management control systems. Thus, auditing has limited application for the assessment of government performance. This does not mean that a country's auditing and financial control authorities should not conduct evaluations. On the contrary, an evaluation of government performance and a check of the performance of political programs corresponds exactly to the demands, which were laid down in the guidelines published by the International Organization of Supreme Audit Institutes and recommended for adoption by its member states.⁸ In order to competently conduct a comprehensive performance audit, the governmental control agencies must expand their traditional set of instruments and acquire additional knowledge in the area of sociological techniques.

Compliance Auditing

A major difference between management control and auditing is based on the fact, that audits are process independent. Auditors, especially external auditors, come from the outside into an enterprise and, as a rule, examine in past terms by comparing production levels, processes, and results with established standards. The traditional auditing and management control tools were created first and foremost for the analysis and assessment of financial measures and find limited application when used to assess performance, where a relation to monetary cycles is lacking. Thus external auditors are primarily interested in accounting (annual statement of accounts) and bookkeeping.

In contrast to this, there are checks conducted by internal examiners, called internal audits. An internal audit can be described as a management tool shaped and created by the business executives, in whose the members of an organization systematically analyze and assess operational procedures and facts within the organization. In short, an internal audit is foremost responsible for providing the management with data that is correct and faithful to the facts.

Management Control

The primary responsibilities of a controlling authority in public management are coordination, regulatory, and information tasks.⁹ According to Schmidberger, administrative management control should create regulating systems and improve available systems. This work can be done by optimizing or adapting existing systems or by establishing a system where one is lacking. In addition, administrative management control must prepare methods and instruments to support management's decision-making processes. Further responsibilities must be carried out in connection with information management, especially by

creating as many sources of information as possible and preparing it appropriately for consumption! Since attentiveness in public management is inherently in short supply, it is increasingly urgent that information management is adapted and modernized.¹⁰ In summary, it can be said that a controller is responsible for reconcile the demand for information with the supply. In this, he must rely on information he considers correct, whereas an auditor persuades himself whether the collected data is complete and correct, and whether the changes prove its worth in everyday operations.

Evaluation as a Part of a Comprehensive Performance Audit

Of the examination procedures known from the literature, an evaluation is the tool most suitable to assess and judge the effects of complex government programs.

An evaluation should help those responsible for a program to conduct and implement the program as well as provide the political decision makers with objective information needed to improve the quality of their decision.¹¹ An evaluation conducted strictly according to correct procedural rules also thwarts well-organized interest groups from exerting unfair influence on a political decision, and thus provides a foil for lobbyists.

Evaluations can be undertaken for various reasons. According to Chelimsky,¹² evaluations are conducted, for example, when it is important to assess the adequacy of program changes, if possible improvements in existing programs are indicated, or if it is necessary to prepare a report for a legislative

or executive body. Evaluation studies can also serve to test innovative proposals or compare and rank existing programs against each other.

Although evaluations are the primary type of checks used for political programs, they cannot be used for a global assessment of government dealings. The effort would be too great, the costs would be immense, and the necessary personnel for such testing throughout the entire administrative area would not be available in all likelihood. For this reason, performance audits based on performance indicators were developed.¹³ According to current administrative theory, performance indicator systems are based on two types of indicators, a qualitative and a quantitative one, which must be carefully evaluated for each individual administrative activity. In contrast to heuristic procedures that often get stuck in the brainstorming phase, a coherent selection of the indicators allows the greatest possible objectivity in the shaping of assessment processes while limiting subjectivity in favor of transparency and substantiality.¹⁴ Since an evaluation is generally a time-consuming examination process, it is a tool only used for political programs with large resource requirements and exposed to public opinion. Programs with limited resource consumption, less public exposure, and fixed work procedures can usually be examined using simpler check procedures, such as performance measures.

COMPREHENSIVE PERFORMANCE INDICATORS IN UNIVERSITY FUNDING

General Introduction

Similar to society in general, the universities, at the end of this century and the dawn of a new millennium, see themselves exposed to various trends from which they cannot escape. Generally speaking expressed in the words of the day, these are globalization and sharper competition; increased government debt and thus tighter government spending that must be divided among a continually increasing number of institutions. Education and science are in direct competition with social welfare services, agriculture, public transportation subsidies, or national defense. Voices are heard in legislative bodies asking whether it would not be more appropriate to cut funding to education in order to plug the financial holes in federal old-age pension schemes so that at least the social safety net remains intact. Concurrently, the number of students and the large amounts invested in research have expanded rapidly while, in parallel, parliamentary and government interest in the application of funding has shifted conditioned by the constant increase in the share of the gross national product devoted to research and education. Just knowing that the budgeted funds have been appropriately applied no longer satisfies the legislators in many cases. Rather, they want information from the education ministry in charge and from university management about whether the investments made in fact have brought about the desired effect and whether the moneys approved were applied in the correct place. The administration is therefore asked to conduct comprehensive performance audits including program evaluations, which say something about goal achievement (effectiveness), the relationship between input and output compared with other similar organizational units (efficiency), fiscal responsibility (economy), and indirect intended and unintended effects.

The Higher Education Landscape in Switzerland

Switzerland has nine cantonal universities and two federal technical universities. Around 95'000 students are currently registered at these universities. Since the 1950s, when only approximately 5% of any

corresponding age group enjoyed a university education, the number has risen to 28% today in Switzerland and 35% to 40% in the OECD countries. Thus universities have been confronted in recent decades with a veritable rush of students, with which budget developments have in no way managed to keep pace.

The University Policy Program of the Federal Government

Depending upon the system of education, tradition, and country, the government takes on differing responsibilities, which are tied to a corresponding financial involvement. In Switzerland, the primary responsibility for university support rests with the cantons (similar to the federal states in Germany) in which they are based. These finance the lion's share of the university budgets themselves. In addition, the cantons with universities receive moneys from the cantons without; finally, the federal government provides subsidiary financial assistance to the universities. The latter share is around 15% to 25% of the annual university budgets.¹⁵

According to the new university funding law three forms of financial assistance of federal programs can be differentiated:

basic funding: funds that are passed on to the universities to compensate them for their running costs. Total volume per year: Sfr 400 million.

investment program: Funds earmarked by the universities for investments in physical plants, equipment, or computers. Total volume per year: Sfr 70 million.

project-related funds as a special program. Total volume per year: approximately Sfr 45 million.

Since the new Federal Law on University Funding has fundamentally changed the playing rules for programs, the Federal Office for Education and Science, at the express request of parliament, has started to develop a concept to realize a comprehensive performance audit which would allow a better assessment of the performance and the design of the new programs at the end of the legislative period.

Besides the actual performance audit which the Federal Office for Education and Science will conduct, the Federal Audit Office will continue with its classical compliance audits. Since this type of check must be carried out officially and extensive concepts and procedures already exist, we will forgo further discussion about this here.

Economy or fiscal responsibility, as used as a measure of performance in relation to standard costs, will also not be dealt with in greater depth here. Since the federal administration is not familiar with cost accounting tools, only over-simplified considerations could be made about how "economical" programs are. However, measuring the efficiency of procedures and structures could produce an indirect estimation of this.

PERFORMANCE AUDITS FOR BASIC FUNDING

The Current Situation

Under the new Federal Law on University Funding, funds for universities are no longer input- or expense-oriented but are now allocated on a performance-oriented basis according to assessment criteria. These criteria are aligned to university policy goals, which favor a structuring of courses of studies, shorter lengths of study, increased outside financing (from research and services), as well as general economy in providing university services. Performance-oriented financing, which has replaced conventional expense-oriented financing, has met with a positive response in parliament and in the media while also drawing sharp criticism. Although it was clear to all participants that expense-oriented subsidization corresponded neither to modern government theory nor to current administrative practice, initial resistance to the new allocation model was fierce. In the meantime, the participants have come to terms with the new situation.

In concrete terms, the following assessment criteria are anchored in the new Federal Law on University Funding.

For teaching performance: For the teaching performance a contribution is allocated per student, differentiated according to faculty, for the normal term of a course of study. Twelve semesters is regarded as a normal term for a course of study for all faculties except medicine, which is sixteen semesters. The federal contributions per student are different for each of three faculty groups parallel to the provisions in the Inter-cantonal University Agreement (IUV) - corresponds to a horizontal financial compensatory adjustment - and takes relative cost differences into consideration. Thus it can be assumed that the costs are standardized for each faculty group, which integrates economic efficiency. This is meant to provide an incentive for the universities to make a student's completion of a course of studies as early as possible through a tighter organization of course and examinations. Foreign students

were included in the model as a further allocation factor, since this group is not affected by the horizontal financial compensatory adjustment as foreseen.

For research performance: Basically those means, which the universities receive from the Swiss National Foundation, through credits from the European Union and the Commission for Technology and Innovation (KTI), or from private sources, are used for the measurement of research performance. All of these funds are allocated through a competitive grant procedure. Therefore, these can be considered performance-related measures, which have already been subjected to another qualitative assessment process (peer review).

These assessment criteria or indicators are weighted and then linked to a simple, linear model, the individual elements and the weights of which were the subject of intense debate. Different model financial simulations have shown that the financial support flowing to the individual universities would undergo a substantial change under a model change with constant contributions (zero-sum game). For this reason, the new law allows for liberal transition deadlines as well as a special fund, which provides the small and medium sized universities with a cushion to absorb excessive losses resulting from the change of system. This was the political compromise, which was worked out and made it possible to win over the support of a majority of the members in the federal parliament.

Checking Results

Results must be checked along the lines of an effectiveness control to see whether the goals have actually been achieved as envisioned under the performance-oriented financing and whether significant changes have taken place. On the output level, this would be a real established reduction in the length of study, an

internationalization of the teaching area that would indicate an increase in the number of foreign students, and, finally, an intensification of research activities in national and international areas as well as an increase in outside funding to improve the financial base of the universities. Such an assessment would also make it possible to say whether the universities' efforts were rewarded sufficiently or whether their efforts would not lead to the desired result. If - due to the system mechanisms - only very small changes are possible, this would indicate that the system is very inflexible and rigidly cemented in the status quo, which is certainly not desirable.

On the outcome level, the universities' positioning in regard to their research activities on a national and international level as well as the students' level of satisfaction with the teaching faculty would be of interest. This evaluation can be conducted relatively easily based on information available from the Swiss Science and Technology Council as well as from the Federal Statistical Office. The strong trend toward more research is primarily important for giving the traditional universities a clear profile compared to the universities of applied science (technical colleges), which are built up in Switzerland at the moment.

Although it is possible to provide a picture of effectiveness based on the present objectives, it is far more difficult to assess the efficiency of a program in terms of output or outcome. One possibility would be to relate the federal subsidy share to actual behavioral changes and compare all universities among each other. However, since we are not dealing with closed systems here, a clear assignment of input to output or outcome, is extremely difficult to demonstrate. A further question that would primarily interest parliament has to do with the Special Fund, which was provided in order to strengthen and preserve the competitiveness of smaller and medium-sized universities. The parliamentary debate over this fund was hard fought and approval was finally won only after a lengthy dispute.

Checking Structures and Processes

When detailed regulations exist for processes and structures, effectiveness controls are a matter for a compliance audit. If an administration does not conform to the letter of the law, it is liable for prosecution. It has no other choice but to stick to the given decision-making processes. This also applies for this program and explicitly for the calculation of the federal subsidies and the organization of programs associated with them. Since the federal investment program deals with large sums of money, the program structure and the calculation are spelled in the law in detail. The reason for this is the necessary provision of legal protection for subsidy recipients in this area.

In conjunction with the program structures and the corresponding processes needed to implement the program, it is already possible to say something concrete concerning efficiency. Based on the deployment of labor in the administrative offices concerned, it can already be assumed that the new program will absorb significantly fewer resources than the old program. The reason for this is, that up until now, a portion of the data had to be gathered especially for the calculation of basic funding. This data was then checked by the administration in a long and time-consuming process and manually reprocessed. Today the data, which is necessary for the results-oriented financing, are provided by the Federal Statistical Office and other federal agencies to the Federal Office for Education and Science in electronic form and reprocessed electronically. This also does away with the need for a costly quality assurance system in the Office for Education and Science, since the federal agencies have already checked their data using plausibility controls and random samples.

Checking Appropriateness

A check of appropriateness is meant to determine whether the federal university policy goals could not have been achieved through other strategies. This could be considered through a further simplification of the calculation model based on a cost-accounting procedure that means what it says. This basic subsidy could be made dependent on whether federal university policy goals were achieved. If this were not the case, corresponding budget cuts could be foreseen.

However, the question of whether the cantonal universities are sufficiently compensated for their efforts by the federal government already results in fierce debates whenever it is raised in parliament. The adequacy of the level of funding is thus subject to tradition (on-going budget perpetuation) and part of a political understanding. For this reason, it eluded evaluation to a large extent.

PERFORMANCE AUDITS FOR THE INVESTMENT PROGRAM

Since 1968, when the first Federal Law on University Funding went into effect, the federal government on a regular basis has provided investment funding to the universities that was intended for larger investment projects in physical plants, computers, and equipment. There is practically no change in this area under the new law. The federal share for projects entitled to subsidies is between 30% and 50%, depending on the financial strength of the cantons. Funding requests are submitted by the universities or the respective department of education and individually examined by the Federal Office for Education and Science. Since the department receives funding requests for more funding than is available, it must establish a list of priorities together with the universities and the cantons involved. This orders projects according to their priority. The administration must work off this list within the legislative period.

Checking Results

At the output level, a check must be made of how many funding requests were handled to the satisfaction of the subsidy recipient, how many complaints and court cases resulted during the current legislative period, and how quickly the funding requests could be processed. Since the federal government's investment program has only undergone insignificant change in recent years, a comparison to previous legislative periods can provide some information about its efficiency. In terms of effectiveness, checks can show whether all funding requests submitted for consideration were handled.

On the outcome level, it is necessary to check what amount of the federal investment funding was released overall and what national priorities were established. Further, it would be important to determine to what extent the federal funds contributed to the profile building of the individual universities (division of tasks and collaboration). Since sufficient time series are available for this program, it is possible to say something about its development and indirectly about its efficiency as well.

Checking Structures

As mentioned, checking the funding requests results in relatively high human resources costs for the offices involved. These are the Federal Office for Education and Science, the Federal Office for Buildings and Logistics and the Federal Audit Office, the cantonal departments for education, buildings, and auditing, and the responsible departments at the universities. Since the organizational units delegated to handle the funding requests are spelled out in law and ordinance, the check of effectiveness is a matter for an external audit. Efficiency can also only be determined by making a comparison of the actual

number of people involved over time. This has grown with the autonomy of the universities, while the cantonal authority has reduced its presence only partly.

Checking Processes

Since the amounts subsidized for this program are substantial, the corresponding processes are clearly spelled out in great detail in law and ordinance in order to provide the subsidy recipients the greatest possible legal protection. Effectiveness audits are therefore of interest for external auditors or the Federal Audit Office primarily and are not handled further here.

The efficiency of all processes can be indirectly evaluated by measuring the processing time for funding requests and, and on the results side, the satisfaction of the subsidiary recipients as already mentioned.

Checking the Appropriateness of the Entire Investment Program

A check of the appropriateness of the investment program should examine whether the goals could not have been achieved better with another strategy, whether the program has sufficient resources, and to what extent procedures could be improved. A completely new strategy would be allocating the investment moneys to the universities in the form of a lump sum budget with the stipulation that these funds are only to be used for investment that correspond to particular previously negotiated university policy goals. This would eliminate the need for the extremely time-consuming individual vetting process for the funding requests. In terms of appropriateness relating to a program's resources, an international comparison could be made of different federal government's participation in the infrastructure costs for

universities and the infrastructure standard achieved. It is safe to assume that the support provided by the Swiss federal government is also responsible for the university infrastructure's excellent condition.

FUNDING LINKED TO PROJECTS

The Current Situation

Funding linked to projects concerns parts of programs, which contain projects to foster youth development, to translate knowledge into action, to support innovative university collaborative efforts, equal opportunity for men and women and new learning technologies. For all of these projects, a comprehensive financial and content report is required each year within the framework of a management control effort. All program parts are subject to a final evaluation at the end of the funding period.

Checking Results and Structures

Since the target for the individual programs are defined in great detail in the corresponding guidelines, it is not difficult to define effectiveness on the levels of output and outcome or impact in this case. The primary interest in terms of efficiency is the program structure and its underlying organization. Since many of the different sub-programs have great similarities, individual programs can be compared. This applies especially for overhead and the satisfaction level at the universities that were in contact with the administration.

Checking Processes

To check effectiveness, an external audit is primarily responsible here as well, since all processes either are spelled out by law or in corresponding guidelines. However, corresponding questionnaires are used to evaluate the process efficiency of all participants. This provides sufficient data to assess the efficiency of decision-making procedures, the quality assurance system, the service provision process and the information system. Since sub-programs are very similar in nature, these factors could be the subject of cross-comparisons.

Checking Appropriateness

Because of the high goals, one suspects that these can only be partially achieved already today. Aggravating the situation is the fact that the program - according to initial reactions - does not have sufficient means available and thus is probably under financed. The distribution of the entire credit made available into six subprograms magnifies this effect as well. For subsidies tied to projects, it must be clarified in the future whether the number of subprograms could be reduced and whether the organizational structures as well as the decision-making processes could not be simplified.

CONCLUSIONS

Given the range and number of federal subsidies in the area of university funding, a comprehensive performance audit is a demanding undertaking but not impossible. Since the said subsidies consist of large amounts of money, the allocation and disbursement procedures as well as the corresponding

program structures are regulated in detail by legal measures, ordinances, or guidelines. This means that a check of the effectiveness of these processes and structures is first and foremost a matter for a classical compliance external audit. In its execution, the administration has practically no room for play. Thus a check of effectiveness, at least as far as procedures and structures is concerned, can be omitted or only examined in a rudimentary fashion.

Something that must be discussed intensively, as far as the planning side is concerned, is the aspect of appropriateness. The focus here must be learning from mistakes and presenting alternatives for program planning so that imbalances can be corrected for a new funding period or the next time the law is revised.

What remains for the administration are above all effectiveness and efficiency audits of the results at different levels as well as efficiency audits of structures and processes to the extent that experience records are available from earlier programs. Together with the checks made during an external audit, this could provide a complete picture of the performance of a specific political program as well as its execution.

NOTES & REFERENCES

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