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ANALYSIS OF GOVERNMENT BUDGET APPROPRIATIONS OR OUTLAYS FOR R&D (GBAORD) IN NORWAY

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NORWAY

Methodology for Analysis of Government Budget Appropriations or Outlays for R&D (GBAORD)

Introduction

In Norway the Research Councils' Committee on R&D statistics has analysed public R&D funding every year since 1970. From 1991 the entire analysis has been performed by the Institute for Studies in Research and Higher Education.

Within NORDFORSK¹ the Nordic countries started their discussions on this topic back in 1972. Guidelines for Government R&D appropriations were published in 1983.² Norway has also participated actively in international cooperation inside the OECD. Here, of course, the work with the Frascati Manual is central.

Purpose of the analysis

The analysis of public R&D funding may be viewed as a supplement to performer-based R&D statistics. A main difference between the two is that while the latter is based on institutional accounts, public R&D funding is estimated from budget figures. On the other hand, performer-based statistics also serve as input to the analysis of public R&D funding, as discussed below.³

The main purpose of the funder-based analysis is to make <u>early estimates</u> on an aggregate level, primarily national and by ministry. The results form an information base for the Government budget process for the following year(s), and are also a major contribution to performer-based R&D prognoses at a national level.

Basic concepts and definitions

The Norwegian analysis of public R&D funding mainly follows NORDFORSK and OECD definitions and guidelines. Thus the Norwegian budget-based analysis is carried out with reference to the official OECD term <u>Government Budget</u>

<u>Appropriations or Outlays for R&D</u> (GBAORD).

¹ NORDFORSK (Nordic Co-operative Organization for Applied Research) was a predecessor to the present Nordic Group for Development of Science and Technology indicators. It merged into the Nordic Industrial Fund, under the Nordic Council of Ministers, in 1987.

² Guidelines for Analysis of Government Appropriations for R&D ("Retningslinier for analyse af statslige bevillinger til forskning og utviklingsarbejde. (Manual för statsbudgetanalyser)"), NORDFORSK, Stockholm 1983.

³ For further elaborations on the relationship between the two approaches to analysis of R&D resources, see the Frascati Manual 1993, pp. 125.

Thus the concept of <u>R&D</u> is fundamental to the analysis, and as far as possible all the Frascati Manual guidelines and conventions for distinguishing R&D from other activities are applied, e.g. other S&T activities (which are not included).

The definition of government also follows the Frascati Manual, and refers to central government. Funds for provincial or local government are not taken into account unless such funds are included in central government budgets.

Main features of the budgetary process in Norway

In Norway the fiscal year corresponds to the calendar year. The Government presents the <u>provisional budget</u> in early October, for which each of the 15 present ministries prepares a separate budget document.

During the period October - November the budget proposal is discussed and acted upon by the various Parliamentary committees. The <u>final budget</u> appropriations are usually agreed upon by the middle of December.

After the final budget is ready, of course, <u>budget changes</u> occur, also regarding R&D appropriations. These changes are summed up towards the end of the budget year.

Norway has no separate R&D budget, but the Government budget does include a table on Government budget R&D appropriations. This table, however, is based on the above analysis rather than on an aggregate of ministry R&D budgets.

The scope of the GBAORD analysis

Both <u>provisional and final</u> appropriations are surveyed. So are budget period <u>changes</u>. For the latter the information basis is scarcer, i.e. on funder intention. Minor reallocations between programmes or projects may thus be ignored. Apart from this there are no major principal differences between the three budget stages recorded.

The analysis of GBAORD comprises <u>basic research</u>, applied research and <u>experimental development</u>, in accordance with the Frascati Manual. It also comprises <u>all fields of science</u>, i.e. natural science and engineering (NSE) and social science and humanities (SSH). The analysis, however, does not include any distinction between these categories; such distributions are to be found in performer-based statistics only.

The above also applies to the dichotomy of <u>civil and defence</u> R&D. An approximation, however, can be made by looking separately at the GBAORD from the Ministry of Defence.

In Norway GBAORD include R&D in public enterprises.

The analysis includes both <u>current and capital</u> appropriations. These may be reported separately to a great extent. <u>Block grants</u> to non-government institutions, however, can not be split into current and capital costs. According to the Frascati Manual this is not necessary, as there are no such intentions expressed by the funder.

It also includes <u>Government loans</u> to R&D projects, as far as they can be considered as a <u>loss</u>, i.e. if they are not payed back.

<u>Pension costs</u> are estimated and can be reported separately.

No VAT is charged on R&D in Norway.

The analysis does <u>not</u> include <u>appropriation authorizations</u>, though these have become a controversial part of R&D budget discussions, especially in connection with the Research Council of Norway.

The GBAORD include and are classified according to <u>direct receiver</u> of the funds. The further allocation to R&D performers, however, is not accounted for. The classification distinguishes between:

- universities
- research councils/the Research Council of Norway
- other R&D-performing units
- other programmes, projects and funds
- abroad

Government funding of <u>industrially performed R&D</u> is included, but it does not hold a category of its own. It is partly covered under "other programmes, projects and funds", though to a large extent such funds are channelled through the Research Council of Norway.

Another available classification is defined by the <u>socio-economic objective</u> of the appropriations. In this respect the NORDFORSK standard defines 16 socio-economic objectives⁴. This standard can be translated into the OECD and NABS (1 digit level) standards. All activities are classified according to main objective, i.e. each budget item is attributed to one objective only, without regard to possible secondary objectives. The analysis is based on available documents prepared by the ministry that provides the funds. The budget does not include any information on faculty or field of science.

Concerning <u>biotechnology</u> and <u>information technology</u> neither is given any special attention in the analysis today, and are thus not defined in this context.

The analysis gives no breakdown by country, which means that the

⁴ See OECD Frascati Manual 1993, page 121.

category <u>developing countries</u> is not directly defined in the analysis. To some extent estimates of R&D appropriations for such purposes may be produced by aggregating single chapters or sub-chapters under the relevant ministries, but these are not regular categories in the present analysis. Other information sources will also probably have to be taken into account.

In principle all kinds of <u>international cooperation</u> are included, i.e. as long as they can be detected through the analysis. These include cooperation through international organisations, institutions and programmes. In this respect the information base is limited, as only a few international institutions are surveyed along with the performer based statistics. However, the past couple of years the Institute for Studies in Research and Higher Education has annually prepared special reports on international cooperation based on the GBAORD and additional information. There is no distinction between <u>bilateral and multilateral</u> cooperation in the analysis today, but both are included.

Assessing GBAORD

For all R&D-performing units, including those of higher education, R&D coefficients from the national R&D statistics are used. When it comes to grants and other contributions, the R&D component is estimated on the basis of the text in the budget documents. In cases where the information in the budget is too scarce, the ministry or agency involved is contacted.

According to the Norwegian <u>budget structure</u> the budget of each ministry consists of budget chapters, each encompassing an institution, a Government programme or action. Within each chapter there are sub-chapters signifying appropriations for current costs (wages and other current costs) and capital costs (buildings and equipment), or in some cases a block grant that covers all these types of costs. Within the sub-chapters there are sub-sub-chapters containing more specific costs or actions. We refer to all chapters, sub-chapters and so on as <u>budget</u> <u>items</u>, and these constitute the <u>units of analysis</u>.

The budget items at the various levels are surveyed, depending on the information available and the type of budget item. In some cases budget chapter will suffice, in other cases we have to descend to sub-chapters, sub-sub chapters, etc. For each budget item the R&D component is assessed.

Approximately one fourth of total Government R&D funding is channelled through the Research Council of Norway. For these funds the text analysis of budget documents is supplemented with more detailed information from the Research Council itself. This mainly concerns distributions by ministry, primary receiver of funds and socio-economic objective.

Special note on the Higher Education Sector

The Higher Education Sector in Norway includes universities, university hospitals and university-level colleges, as well as regional colleges, teacher training colleges, maritime colleges, social work colleges, nursing colleges and engineering colleges.

Each university is represented in a budget chapter of its own in the Government budget. The R&D assessments are based on information from the latest R&D statistics available, i.e. calculated R&D shares for each budget item. The basis for these calculations is two-fold:

- surveys on the allocation of faculty working time. R&D coefficients for General University funds (GUF) are derived from the different categories of personnel. Questionnaires have been sent to faculty members in 1971, 1981, and 1991.
- information submitted by the university departments (questionnaires sent to all performing units) and university central administrative units. Such information is required every second year (International Statistical Year ISY).

Generally R&D coefficients for external funding of universities are substantially higher than the ones applied on ordinary appropriations for current and capital costs; in most cases close to 100 per cent.

Concerning the distribution by socio-economic objective, as above, all university funds for R&D, including externally-funded R&D, are classified in the category "general advancement of science".

For more extensive elaboration on the basis of the coefficients, please, find enclosed the separate paper "The Use of Faculty Time at Norwegian Universities" by Dr. Svein Kyvik.

Extramural expenditure, the gross approach and double accounting

In Norway GBAORD includes all government-funded R&D, not only government funded R&D performed in the Government sector. Extramural expenditure, i.e. for R&D performed in the business enterprise sector, higher education sector and abroad, are also included.

According to the gross approach, which is a main principle behind the Norwegian Government budget, all expenditure and receipts should be included in the budget. This means that the budget chapters containing e.g. higher education establishments should include both GUF and externally-funded R&D appropriations. The external funds can not be spent without government permission or without obtaining corresponding receipts. This bears consequences

for the scope of the GBAORD in two ways. First, as far as the appropriations concern institutions included in the Government budget, e.g. universities or research institutes, external funds are included both under the administrative ministry and the ministry paying the external funds. In other words, to some extent appropriations are counted double. Second, external funds from other non-governmental sources to the same institutions are included in the budget. Thus, the budget includes not only public funds, but also to some extent private funds for R&D. This is consistent with the total Government budget appropriations. It is, however, problematic when comparing budget data over a period of time, if the amount of such funds changes substantially from one year to the next.

Prices and deflators

All expenditures are measured in current prices. When making comparisons between years, a flat general consumer price index is applied. No specific R&D deflator is used, as opposed to performer-based statistics for which separate indices are applied for each of the R&D-performing sectors as well as for the various types of costs.

Survey method and data collection

Till now the analysis of the Norwegian GBAORD has been mainly based on public documents, and information on the R&D share from performer-based R&D statistics. No separate questionnaires are sent to ministries, departments or agencies. The underlying assumption is that the R&D share of an institutional budget is relatively stable over a short period of time. The distribution by socioeconomic objectives is based on ministerial documents according to the intention of the funder (budgetary intentions). Very often this information is not specific enough for deriving data on a 2-digit level of NABS. In most cases the ministries appropriate funds for broader programmes within pollution, health care, etc. In other words, there are no budgetary intensions expressed on a 2-digit level.

The data are stored in a data base situated at the Institute for Studies in Research and Higher Education. The data files are organised along two dimensions, budget item and variable or parameter. There are separate files for the provisional and final budget. From this matrix results and tables are extracted.

Svein Kyvik Institute for Studies in Research and Higher Education, 22.11.94

THE USE OF FACULTY TIME AT NORWEGIAN UNIVERSITIES

This paper gives an overview and analysis of how faculty at Norwegian universities allocate their working time on the following tasks:

- Teaching at the university
- Supervision of graduate students
- Research and personal education
- Administration
- Museum activities
- External activities
- Professional activities outside the university

The registration of the use of faculty time at universities can be done in different ways. We asked faculty to estimate the percentage of time they used for various tasks during the year prior to the questionnaire. The best method, however, would have been to have asked all of them, or a representative sample, to keep a diary for the whole year. Another method to cover the whole year would have been to ask 52 different samples to keep a diary of each week. A third method would have been to find a representative week which would give a picture of a year's work, where all respondents or a sample would keep a diary, or would be requested to estimate their use of time based on memory.

There are three reasons why we have not chosen these approaches. First, keeping a diary takes time, and the costs of such a survey would not be in relation to the results obtained. Second, it would have been difficult to find a representative week which would give correct estimates of the use of time for a whole year. Third, the Institute for Studies in Research and Higher Education has done two previous surveys using the same method as in this survey. Comparisons over time are important in this connection.

Data and methodology

The data are drawn from a 1992 questionnaire study among all faculty members

with the rank of assistant professor or higher at Norway's four universities. The response rate was 69 per cent, which means that a total of 1,815 academic staff completed and returned the questionnaire. Faculty were asked to estimate the approximate allocation of their working time between the above mentioned categories during the previous year (January 1st to December 31st, 1991). They were also asked to estimate the approximate number of hours they worked in an average week. We have thus been able to compute the number of hours used for various activities during an average week.

In the instructions we made it clear that: "Your estimates should only be made for that part of the year in which you held a university position, or another position with an office at a university department or affiliated unit. If you had a research sabbatical for part or all of the year, this should be included in your estimates. Include the total time you used in connection with your university position and other professional activities, even if some of this time would not be considered "normal" working hours. Please remember that we are asking you for estimates for the whole year, not just for the academic year. Less time will be allocated to research, for example, during the academic year than otherwise. We ask you to consider this when answering the questionnaire".

This approach however raises some problems which have to be discussed. First and foremost it is problematic for academic staff to separate their time on six categories of work duties. The borders of the various categories are not clear-cut. For example, background reading is often undertaken without knowing whether it will ultimately contribute predominantly to teaching or research. Similarly, the supervision of graduate students may have elements of both teaching and personal research, particularly in the natural and medical sciences and technology.

A special note should be made about the category "research and personal education". Using this definition it is difficult to say how much time is used for research work and how much for personal educational activities. Theoretically, a large proportion of the staff might primarily be concerned with their personal education and not spend much time on active research. Objections can therefore be raised against including personal educational activities in this category. On the other hand, research and personal education are very closely connected. All research involves the expansion of personal knowledge and in practice it will be difficult to distinguish between these two activities. In a study about the way faculty at the University of Oslo used their time during a week in October 1971, the attempt was made to survey the relationship between the time spent on research and the time spent on furthering personal education. In that study it was

found that personal educational activities made up, on average, less than one fifth of the time registered in the category "research and personal education" (Sandbo, 1973). The main point of this category, however, was to register how much time would be left or prioritized for such activities. The extent to which this time will be used for research which results in scientific publications is therefore another question.

Moreover, the way in which respondents were asked to register their use of time could include errors. Faculty were asked to estimate the approximate allocation of their time in the previous year and thus had to trust their memories. The results therefore reflect the average conception of how working time was used, not necessarily how this time was really spent. The reliability of the correspondence between conception and reality is, however, not easy to ascertain. Thus an enquiry of this kind can only give an approximation of the situation. However, we still feel a reasonable degree of confidence in the results, as there hardly has been any systematic bias in individual conceptions. Through interviews at the universities at a preparatory stage of a former study, individual staff members were asked whether they believed that such an enquiry would give a correct picture of their own use of time. Opinions were mixed, but no evidence was given that the response would be systematically biased (Kyvik, 1983).

Another reason why we feel fairly confident in the results is that they are consistent with other empirical studies and indicators. First, three former surveys have shown results consistent with the present one. Second, in one of these surveys faculty at the University of Oslo were asked not only to estimate the allocation of their time in the previous working year. They were also asked to maintain a special diary for a specific representative week. When comparing these results with one another, the approximate estimates of the previous working year differed only slightly from those of the surveyed week (Sandbo, 1973). Third, an observed change in the average allocation of working time by rank during a 25year period is in accordance with formal changes in the working duties undertaken in the course of the same period. Fourth, there is a fairly good relationship between estimated time used for administration and participation on university boards and committees. Thus, we feel safe in concluding that this survey does give relatively good estimates of how the faculty allocate their working time, even though the enquiry has been based on retrospective estimations of the use of time in the previous year.

The classification of faculty members into five fields of learning has been done according to the guidelines for R&D statistics suggested by UNESCO (1978).

The use of faculty time in 1991

Tenured faculty had an average working week of 50 hours in 1991 (52 for full professors, 50 for associate professors and 48 for assistant professors, including the time for activities which are paid for above their ordinary salaries as faculty members. How long then is the average working week when we only include the work they did as university faculty? On average faculty used 9 per cent of their total working time for "external activities" and "professional activities". According to the definition of these categories in the questionnaire (cf. annex), they are activities which come in addition to their university positions. If we exclude the time used for "external activities" and "professional activities", we have an average working week of 45 hours for university faculty (46 for full professors, 45 for associate professors and 43 for assistant professors). This amounts to 7.5 hours more than the norm for regular working time for state employees. It should, however, be noted that "external activities" and "professional activities" are activities which university faculty to a large extent are expected to do, even though this work is paid for, or rewarded by, institutions other than their own universities.

In the 1981 survey the questions were the same as those in 1991, and at that time the average working week in a university position was also 45 hours, versus a total 49 hours. If we compare these results with corresponding studies, we find that Norwegian faculty have similarly long working weeks as their colleagues in most other countries. A survey among faculty members and research staff at universities in the EC in 1984 found that the average working week was 47.5 hours (versus 50 in Norway in 1991). The figures for specific countries are given below (Franklin, 1988):

Country	No. of hours
Germany	52
Denmark	48
France	48
Belgium	47
The Netherlands	47
Great Britain	46
Ireland	45
Italy	45
Greece	44
Spain	42

The following categories were included in that survey: research, administration of research projects, other administrative tasks, teaching, supervision, other professional activities. Even though these categories are not the same as those in the Norwegian survey, the EC study also includes activities outside a normal university position. The total number of hours in the two studies may, therefore, be compared.

A survey undertaken among faculty at American universities done by the National Science Foundation in 1978-79 showed similar results. On average people worked 48.2 hours a week, including work outside their university position. The number of hours used for outside activities were 4.2 or 9 per cent of their total working time (Bowen and Schuster, 1986).

The allocation of working time on different activities is given in Table 1.

Table 1. The allocation of working time in 1991. Average week.

	%	Hours
Teaching at the university	29	14.3
Supervision of graduate students	13	6.3
Research and personal education	31	15.3
Administration	17	8.6
Museum activities	2	0.7
External activities	6	2.9
Professional activities outside the university	3	1.6
Total	101	49.7

In Table 2 the results are broken down by field of learning. The Table shows that staff in the humanities used more time for teaching than the other fields, while we find the opposite pattern in medicine. On the other hand, in the humanities far less time is used for supervision than in the other fields, especially in technology. There are only small differences between fields with regard to time used for research, administration and external activities. The amount of time used for professional activities outside the university is, however, higher in medicine than

in the other fields.

Table 2. The allocation of working time in 1991, by field of learning.

	HUM	SOC	NAT	MED	TECH
Teaching at the university	34	30	28	23	29
Supervision of graduate students	8	12	13	14	18
Research and personal education	29	33	32	30	29
Administration	18	16	18	17	14
Museum activities	3	-	3	-	-
External activities	7	7	5	6	5
Professional activities outside the university	1	3	1	9	5
Sum	100	101	100	99	100

The use of faculty time 1966-1991

The Institute for Studies in Research and Higher Education collected data on the use of time at universities in 1966, 1970, 1974, 1981 and 1991. However, the methodology has differed. For one thing the surveys in 1966 and 1974 were undertaken at a department level, not on an individual level as in 1970, 1981 and 1991. The heads of departments were asked to estimate the approximate allocation of time to various activities for each individual staff member in the previous year. This request was handled somewhat differently by various departments. At some of the departments, each individual staff member was contacted. At other departments the head probably estimated the use of time on behalf of each individual. The results from these surveys may, therefore, be less reliable than the results from the surveys in 1970, 1981 and 1991.

Secondly, the categories were different. In 1966 and 1974 "external activities" and "professional activities" outside the university were one category. In 1974 "supervision" was omitted as a distinct category. In order to have comparable

data, "external activities" and "professional activities" were gathered into one category; "external activities". Time used for supervision was divided between teaching and research. In order to find out what proportion of the time spent on supervision might be regarded as teaching or research, we asked the staff in the 1991 survey about the extent to which they regarded the supervision of graduate students as part of their own research. Reply alternatives were "To a great extent", "To some extent", "None", and "Doesn't apply". Far fewer regarded major subject supervision than Ph.D. supervision as important. Of those who supervised major subject students, 21 per cent answered "to a great extent" and 55 per cent "to some extent". Of those who supervised Ph.D students, the equivalent figures were 49 per cent and 38 per cent.

There are, however, large differences between fields of learning in this respect. The proportion of faculty members who answered that supervision was part of their own research to a great extent was much higher in the natural sciences, medicine and technology, than in the social sciences and humanities. This is the case both with regard to supervising major subject and Ph.D. students (Table 3).

Table 3. Percentage of faculty who assessed supervising major subject and Ph.D. students to be part of their own research to "a great extent", by field of learning.

	HUM	SOC	NAT	MED	TECH	TOT
Major subject students	8	7	31	30	22	21
Ph.D. students	18	19	60	59	67	49

From this Table we calculated that in the humanities and the social sciences, 80% of the time spent on supervision was regarded as teaching and 20% as research. In the natural sciences, medicine and technology 60% of the time used for supervision was regarded as teaching and 40% as research.

In order to have the best possible basis for comparison, we have, moreover, excluded persons involved in museum work.

Table 4 shows the average allocation of academic staff time in the period 1966-91. The main conclusion is a very stable pattern over time. Staff used less time for teaching in 1981 than in 1966. This change has not, however, resulted in a

significantly higher research share. On the other hand, faculty used more time for administration in 1981 than 15 years earlier. This change in the allocation of time spent on various activities seems mainly to have taken place before 1970.

Table 4. The allocation of working time in the period 1966-91. Percentages.

1966	1970	1974	1981	1991
45	42	42	40	39
34	33	35	33	36
14	17	16	18	17
7	9	7	9	9
100	101	100	100	101
	34 14 7	34 33 14 17 7 9	34 33 35 14 17 16 7 9 7	34 33 35 33 14 17 16 18 7 9 7 9

R&D coefficients

The information given in Table 4 has furthermore been used to estimate R&D coefficients for the Norwegian universities. According to the guidelines for R&D statistics, Frascati Manual, OECD, administration is to be included under teaching, research, and external activities when relevant to these activities. Administration is, accordingly, regarded as an assisting activity for teaching, research and external activities, and the proportion of time used for such administration is allocated to these three activities according to their relative share of the total working time. For example, including administration in these activities for 1981 will change the percentages of working time as follows: Teaching, 49%, research, 41%, and external activities, 10%.

The above-mentioned figures do not mean, however, that faculty on average use 49% of their working time for teaching, respectively 41% and 10% for research and external activities. These percentages must be viewed as an expression of the total use of time for these three activities under the assumption that: 1) supervision has both a research and a teaching component, and 2) administration is an activity which prepares the ground for teaching, research and other activities.

There is no empirical reason for distributing time used for administration to teaching, research and other activities. That one allocates time used for administration to these three activities in relation to their average percentage of working time may, therefore, be disputed. This distribution might result in, for example, an overvaluation of the importance of administration for faculty research. However, we have no evidence to support this assumption.

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Annex

The Use of Faculty Time, 1.1.1991-31.12.1991

Per cent

You are requested to estimate the distribution of your working time in 1991. Your estimates should only be for that part of the year in which you held a university position, or another position with an office at a university department or affiliated unit. If you had a research sabbatical for part or all of the year, this should be included in your estimates. Include the <u>total</u> time you used in connection with your university position and other professional activities, even if some of this time would not be considered "normal" working hours. Please remember that we are asking you for estimates for the <u>whole year</u>, not just for the academic year. Less time will be allocated to research, for example, during the academic year than otherwise. We ask you to consider this when answering the questionnaire.

Teaching at your own university

Per cent

Please include your formal teaching time and the time you actually used for teaching, including preparation, reading students' papers, etc. You should include any activities which are part of university instruction, such as, further education courses and other teaching activities, including curriculum planning, undergraduate student supervision, counselling, excursions, work on textbooks, exams, judging doctoral theses, etc.

Supervision

Per cent

Please estimate the time you used for supervising major subject students, students taking diplomas and scholarship holders, as well as the time used for supervising fellowship holders, doctoral degree candidates and research assistants.

Research and personal education

Per cent

Please estimate the time you used for you own projects, supervising or assisting other projects, e.g. technical assistance, planning help and other kinds of professional contact. You should also include work directly connected to research, for instance, reading literature, publishing results, travelling and the planning of projects, conferences, and your own educational activities. Please include research connected to your university position, as well as research which you have done externally (for example, at a university hospital).

Administration Per cent

This category comprises administrative work, meetings, etc. at the university. Include all administrative work affecting university activities which can not naturally be included in the above categories. For instance, the time spent evaluating applications for positions at you own university, the time used to evaluate students' applications, replying to minor inquiries, etc.

Museum activities

Per cent

This includes administrative work and the time used for collections and exhibitions.

External activities

Per cent

This includes teaching at other universities and colleges as a guest lecturer, instructor, etc. It also includes teaching and work on textbooks, curriculum planning, etc. for other institutions, organisations, associations, etc. You should also include examination work for other universities. Furthermore, please include work for journals as editor, etc., the press, media, encyclopedias and lectures for lay audiences. Tasks and assignments for external institutions and organisations should be included here, for example: membership on boards, committees, research councils, etc.

Professional activities outside the university

Per cent

Please include all professional activities which you have not mentioned above. This could be work at a university hospital, practice as a lawyer, physician, dentist, or similar consultancy work. If your external position involves research, you are requested to list this above and not here.