

## Summary of advisory report 58

### The price of success. Matching research subsidies in knowledge institutions.

#### Subject, scope and urgency

This report concerns the matching of research subsidies in Dutch public research institutions, particularly universities. Research subsidies obtained from indirect (non-government) funding and from contracts – e.g. from the Netherlands Organisation for Scientific Research (NWO), the Subsidies (Investment in Knowledge Infrastructure) Decree (Bsik), the EU Framework Programmes, the Ministry of Economic Affairs' incentives schemes, and funding collection schemes – only cover part of the total costs of research. Research institutes are expected to pay the remaining costs themselves from their basic funding (government funding). This is the so-called matching obligation.

The present report by the Advisory Council for Science and Technology Policy (AWT) addresses the following questions:

1. What is the extent of matching in public knowledge institutions and what effect does this have on the scope for strategy development in those institutions?
2. What directing effect do matching obligations have and what are the wanted and unwanted consequences?
3. What changes in policy and practice are appropriate and desirable?

The AWT is publishing this report on its own initiative. The report points out that matching now plays a significant role in knowledge institutions in that it places severe restrictions on the scope for expenditure and on the institutions' ability to invest. The Council is of the opinion that there is an urgent need to reconsider the practice of matching, not least because the pressure to apply matching will certainly not diminish in future: the increase in indirect funding for research and in contract-funded research will continue. However, another reason is that various parties are currently working on revising the budgetary models for research. The Council believes that all further budgetary discussions must take the matching problems into account.

#### The extent of matching: a study by Ernst & Young

In order to obtain a detailed insight into the financial aspects of matching the Council commissioned Ernst & Young accountants to carry out a study into the practice of matching at five universities and one research institute. In order to obtain a clear picture of the costs and payments for research Ernst & Young performed extensive analyses at institution, faculty and project level.

#### The most important findings in the Ernst & Young report are as follows.

On average, outside funding covers 54% of the total costs of research, with the knowledge institutions paying the remaining 46%. In other words: for every euro that they receive, knowledge institutions have to add 84 eurocents.

- Subsidies are mainly limited to the costs of the personnel directly carrying out the work. Research is done using the existing research infrastructure (premises, apparatus, supervising staff, etc.), but knowledge institutions receive hardly any payment for these costs. This puts pressure on their capacity to invest as well their ability to maintain a good research infrastructure
- Contract-based research is also frequently carried out for less than the total cost price

- The extent of indirect and contract funding has dramatically increased in recent years as regards both the specific institutions studied and the university system as a whole, 2002 level approaches 1 billion euro.
- Matching obligations that relate to the performance of indirectly funded and contract-funded research tie up more than half of the total budgeted amount for government funding of research. What remains can be regarded as the universities' scope for policymaking, within which they have to perform all regular research tasks outside indirect and contract funding. That includes research in areas for which there is little or no indirect or contract funding.
- If the fixed cost of the infrastructure is deducted, a scope for strategic research choices of approximately 25% remains in the basic funding for research. This amount forms the upper limit because Ernst & Young ignored certain costs in their analysis and did not take account of the transfer of research resources to education.
- Technical and natural science disciplines and medical research are indeed confronted most with matching. The greatest effects as regards the total institution are on smaller and specialist institutions.
- Most knowledge institutions do not have a clear picture of the total costs of research. Their administrative systems are not able to properly handle matching obligations.

#### **Direction through matching: the AWT's conclusions**

The Ernst & Young study gives a clear picture of the extent and effect of matching on Dutch public knowledge institutions, particularly universities. Based on this picture, the AWT concludes that there is a serious problem with matching. According to the Council, the current funding system, including indirect and contract subsidies for research and the extent of the accompanying matching obligations, is close to its limit point and in some places already past its limit. Matching is already undermining the strength and quality of the Dutch knowledge infrastructure – and it will do so even more in the longer term. It encroaches too far on institutions' scope for expenditure and on their capacity to invest. They need this scope in order to maintain good conditions for performing research (suitable premises, availability of general facilities such as ICT resources, library, supervising personnel, etc.) and to invest in current or new lines of research.

These financial problems combined with matching have two major undesired effects:

- In attracting research subsidies and contract-based research, strong groups in matching-intensive research areas are in danger of becoming victims of their own success. Matching obligations are increasingly undermining the availability of investment resources, thereby putting a brake on the development of excellence instead of the incentive that is needed. The Council is hearing reports that precisely these high-quality groups are quitting because the price of success is becoming too great.
- There is one-sidedness in the direction, with a strong emphasis on 'knowledge for innovation in companies' because a large part of the indirect and contract-based funding focuses on knowledge development that is relevant for technological innovation in companies. Matching-intensive groups in those areas therefore draw resources away from groups that have little or nothing to do with indirectly or contract-funded research. This can endanger the development of knowledge to tackle social issues or research for reasons of cultural interest.

#### **Factors that make strategic direction more difficult in knowledge institutions**

The Council believes that knowledge institutions are themselves responsible for their use of resources – they must make strategic choices and not sign up for every subsidy scheme. However, there are a number of factors that make strategic direction difficult in knowledge institutions:

- Research subsidies often have a time horizon (four to six years) that is a lot shorter than that for university lines of research (fifteen to twenty years). In addition, there is insufficient consistency in supporting themes. Indirectly funded and contract-funded research therefore requires a dynamism that the institutions cannot really find without sacrificing their strategic approach.

- The combination of open tendering and matching leads to a great deal of uncertainty for knowledge institutions regarding the availability of resources and the commitments made. This makes it more difficult to manage the institutions. Furthermore, the Council doubts whether open tendering leads to an effective and efficient allocation of resources.
- The broad variety in financiers, schemes and terms and conditions makes strategic direction difficult in knowledge institutions. Furthermore, too much responsibility for the maintenance of a good research infrastructure in the longer term lies with the institutions alone. There are no clear rules of conduct governing the payments to be made for research.

There is not enough of an integral approach in the current management of universities. The connection between central strategy and decentralised initiatives needs improving but this requires management information systems that are not present.

### Recommendations

The Council considers that changes are necessary in the funding system and the accompanying matching obligations. The point of departure for the recommendations is that knowledge institutions are themselves responsible for all aspects of management and for balancing available budgets and expenditure in the shorter and longer term. There are three important factors if this point of departure is to be implemented in practice:

1. Suitable conditions for giving a concrete form to the responsibilities of the knowledge institutions. That means certain requirements for the subsidy system and matching practice within which knowledge institutions have to operate. The Council advises the Minister of Education, Culture and Science (OCW) to clearly assume the role of coordinator for three related points in respect of other financiers:
  - a. Revise the matching system by clarifying the desirability and admissibility of matching from basic funding. The point of departure should be that financiers pay at least 100% of the total costs, except in the case of strengthening of the public knowledge infrastructure and public scientific interest.
  - b. Draw up rules of conduct, together with financiers, to govern research funding and the requested matching. Set up a 'Financiers Forum' for this purpose. This will balance the responsibility for maintaining a vital, high-quality, knowledge infrastructure in the shorter and longer term.
  - c. Agree on guidelines concerning tendering: the point of departure should be that financiers are reticent about open tendering.
2. A clear division of accountability between knowledge institutions and the Minister of Education, Culture and Science (OCW), especially as regards accountability for dealing with matching obligations and the related public resources.
  - a. The Council advises the Minister of Education, Culture and Science (OCW) to exercise her responsibility for the entire system by calling knowledge institutions to account for the way in which they deal with matching:
    - Make it clear that good management, including meeting matching obligations, is the responsibility of the knowledge institution itself.
    - Make dealing with matching part of a 'policy-rich dialogue' with the knowledge institutions.
  - b. The Council advises the Association of Universities in the Netherlands (VSNU) to set up a steering group to support the development of methodology to make costs transparent and determine the price of research. It is in the interests of the institutions themselves that they are able to provide transparent costing for research as well as clarity regarding the consequences of the funding methods.
3. If knowledge institutions are to assume their responsibilities they need to deal transparently with matching, within the framework of clear strategic choices and management information systems that guarantee that the strategy will be implemented. The Council advises the Boards of knowledge institutions to improve how they deal with their matching obligations.

- a. Place matching obligations in the framework of a transparent strategy and act accordingly. This particularly requires a good balance between the necessary freedom of movement at the decentralised level and the need for central direction. However, knowledge institutions can certainly be expected to think strategically and not to allow themselves – at the decentralised level – to be enticed by the availability of all kinds of subsidy schemes.
- b. Draw up local rules of conduct for entering into matching obligations. These rules then form the criteria that an institution uses to decide whether to approve a research project below the total cost price. This is another case where the Council believes that the point of departure should be to cover at least the total cost except where there is a question of public scientific interest (e.g. distance to market, public access to data). The central guidelines should dovetail with initiatives to be taken at the decentralised level. Such a 'total' approach to management needs to be supported by transparent rules governing the authorising of financial obligations.
- c. Develop effective information systems for monitoring and managing financial obligations.

### **In conclusion**

The context of this report is a further increase in the flow of subsidies contract funding and 'the injection of dynamism' into research budgeting. Therefore the issue of matching must be urgently reviewed. All further discussions about changes to or adjustments in research budgets or funding should take into account the problems associated with matching. The report provides help in this regard because it offers starting points to how to deal with matching that are applicable to any new distribution and relationship between the various types of funding.

In compiling this report, the AWT particularly wanted to draw attention to the system and practice of matching and the effect that matching has on the strength and quality of the knowledge infrastructure in the shorter and longer term. To this end, the Council assumed throughout that it is in the interests of all parties in the Netherlands – therefore also those who finance research – that public knowledge institutions combine quality and vitality. It is time for a joint approach and action, with the Minister of Education, Culture and Science (OCW) in a coordinating role.