

The R&D Audit: Conclusions and Recommendations

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Erik Arnold
technopolis |group| UK

A core problem is lack of trust

- High levels of cynicism and instability in political life
 - Low level of trust – especially of government – a major block to development of the R&D&I system
 - Leads to attempts to use rule-based methods to overcome governance and processes that are seen as untrustworthy
 - Level of trust in government is low, partly because civil service reforms have not been implemented
 - Leads to over-centralisation of governance and attempts to replace societal and stakeholder interaction with the expertise of researchers
 - Need checks and balances and stability – combined with public and humiliating punishment for those who break trust
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Conclusions ...

- Opportunities further to improve cooperation among the universities, the Academy and the RTOs
 - *Do we have the right division of labour in an increasingly interconnected innovation system?*
- Better links needed between the research system and industry
 - *Governance*
 - *Day to day cooperation*
 - *Signalling, development of human capital*
 - *Industry may need help to articulate needs*
- Excessively rule-based efforts to improve governance. The key need is to develop capacity

Conclusions ...

- Too high a proportion of research funding seems to be subject to competition – this is risky
 - *A better balance is needed among the forces that promote quality, stability and restructuring*
 - Progress in governance
 - *Shift from research focus to be more inclusive of innovation*
 - *Over-centralisation at the cost of stakeholder involvement*
 - *Strategic intelligence needs to be more distributed*
 - *R&D&I Council should set broad directions, not micro-manage or haggle about money*
 - Evaluation is broken
 - *EM is not fit for purpose*
 - *Evaluation more broadly counts the wrong things*
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Conclusions ...

- Research output is improving
 - *More, better publications*
 - *International cooperation as a driver of quality improvement*
 - *Underlines the importance of engaging with the FP and the World*
 - *Internationalisation strategies are needed at both national and institutional levels*
- Research management is problematic
 - *Fragmentation, old-fashioned structures, over-dependence on key individuals, in-breeding*
 - *Human resource development needs modernisation, eg carer planning, succession, gender*

- Science-Industry links are poor
 - *Volume of joint activity is small (though informal links are better)*
 - *Need to address the activities of the MNCs*
 - *Need a mix of support to 'catch-up' and generation of original research capabilities*
 - *Regional pattern of assets is improving via Structural Funds but needs national coordination*
- IPR law is state of the art
 - *But almost no-one understands it or exploits it*

Recommendation 1

- Building trust in government and among members of the R&D&I community is a precondition for successful performance in the NRIS. Such trust is based on fair principles transparently and impartially implemented combined with conspicuous punishment for those at any level who break the rules.
 - *The promised civil service reforms should urgently be carried out*
 - *The state's organisations that aim to manage the NRIS – from the R&D&I Council, the Ministries, the Science Foundation and the Technology Agency – should be required to make details of decisions and reasons for making them public*
 - *Oversight processes, including the use of international peers, should be in place so that there are credible guarantors who can test and vouch for the independence and objectivity of decisions.*
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Recommendation 2

- The size and quality of the Czech R&D&I system have been increasing for a number of years but remain below international levels
 - *The state should continue to increase its investment in R&D, in line with the policy of spending 1% of GDP on R&D by 2020*
 - *Measures need to be in place to encourage industry to spend a further 2% of GDP on R&D by that time, in line with the expectations of the former Barcelona Goal and the new Horizon 2020 policy of the EU*

Recommendation 3

- There are signs that the division of labour and institutional boundaries among the universities, ASCR and RTOs are not optimal and that opportunities for more closely working together are being missed. Outdated forms of organisation and management appear in some cases to impede effectiveness
 - *The R&D&I Council should launch an inquiry into the organisation, performance and division of labour among the universities, ASCR and RTOs with a view to proposing measures to modernise and potentially reallocate roles among these organisations*
 - *Updating human resource and research management practices should be key elements of the resulting reforms*
 - *Measures should urgently be introduced to combat the shockingly low level of female participation in research, which represents a massively inefficient waste of talent*
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Recommendation 4

- Recent reforms have tried to combat lack of trust in government, perceived improprieties in decision-making and perceived lack of capabilities in the Ministries by centralising responsibility for R&D&I budgets and policy in the R&D&I Council
 - *Alongside the civil service reforms, Ministry capacities should be strengthened and the Ministries re-empowered to act in R&D&I by having their own budget lines*
 - *The R&D&I Council should refocus on setting broad strategic directions rather than budget allocation and micro-management*
 - *The Science Foundation and Technology Agency should be given principals in the form of Ministries. Multiple Ministries should be able to use them as funding agencies for their R&D&I activities.*
 - *They should have performance contracts and be managed by objectives, not micro-managed by the R&D&I Council or others*
- *Steering should therefore shift towards soft steering with the involvement of relevant stakeholders*

Recommendations 5, 6

- Good international practice in R&D programming is to involve stakeholders, so as to ensure a fit with needs and opportunities
 - *This is of course subject to checks and balances and the planning and implementation processes must be transparent*
 - *Czech R&D programming practice should respect the international tradition of stakeholder involvement combined with scrutiny to ensure objectivity and independence*
 - The proportion of research funding in the Czech Republic that is delivered under competitive conditions is too high, exceeding levels that many countries regard as dangerous
 - *Institutional funding should comprise at least 50% of research funding*
 - *It should be quality-assured but on a slow (5+ year) cycle that creates stability and opportunities to plan rather than on an annual basis*
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Recommendations 7, 8

- The Evaluation Methodology is not fit for purpose
 - *It should be replaced by a system of performance contracts that have both prospective and retrospective components, supported by a combination of objective indicators and international peer judgement*
 - The system of R&D evaluation in the Czech Republic more broadly focuses on counting outputs at the expense of understanding policy interventions and their impacts. It therefore provides information that is at best of limited relevance
 - *Evaluation practice should be the subject of root and branch reform, refocusing on outcomes and impacts in addition to outputs and contributing to policy and programme development and planning*
 - *This will involve implementing the ‘waterfall principle’ that involves levels in the steering hierarchy using independent expertise to evaluate levels hierarchically below themselves but not in effect being able to do self-evaluation*
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Recommendations 9, 10

- The Czech NRIS lacks an Internationalisation strategy. This inhibits its development
 - *The R&D&I Council should launch a consultation and study to generate a Czech R&D&I internationalisation strategy.*
 - Intellectual Property Rights (IPR) are poorly understood in the Czech Republic. Few understand the breadth and usefulness of a proper IPR strategy
 - *The employers' organisations or chambers of commerce should launch a campaign of IPR education for industry*
 - *The universities and institutes need to develop clearer IPR strategies*
 - *This does not mean that there should be further pressure to patent the irrelevant – rather, understanding IPR properly allows rational decisions to be made about what not to patent and how best to share knowledge with industry and other organisations outside the research and higher education sector*
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Thank you

erik.arnold@technopolis-group.com

technopolis |group| has offices in Amsterdam, Ankara, Brighton, Brussels, Frankfurt/Main, Paris, Stockholm, Tallinn and Vienna
