Use of Progress Reports in Post-Evaluation at TUBITAK

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ACADEMIC RESEARCH FUNDING PROGRAMMES DIRECTORATE
OUTLINE

About TUBITAK
– Academic Research Projects
– Evaluation Method

Post evaluation
– Progress and Final Reports
– Contribution to Science and Technology
– Contribution to Career Development
– Public Interest and Media Coverage
The Scientific and Technological Research Council of Turkey

Established in 1963

Total Budget: ~ 600 million Euros / year

- Science, Technology and Innovation Policies
- Research – Institutes
- Funding (~300 millions Euros / year)

- Academic research projects
- Industrial research, development and innovation projects (>7000 projects, < %30 selected for funding)
- Student Scholarships
Science and Technology Indicators

Sources: World, Europe: UNESCO Science Report 2005
Turkey: TURKSTAT, Thomson’s ISI Web of Science, OECD MSTI 2007/2
Science and Technology Indicators

* Reference year is 2002

**Sources: World, Europe: UNESCO Science Report 2005
Turkey: TURKSTAT, Thomson’s ISI Web of Science, OECD MSTI 2007/2
<table>
<thead>
<tr>
<th></th>
<th>2000</th>
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<tr>
<td><strong>Triadic Patents</strong></td>
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<td>10</td>
<td>12</td>
<td>17</td>
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<tr>
<td><strong>FTE Researchers</strong></td>
<td>23.083</td>
<td>22.702</td>
<td>23.995</td>
<td>32.659</td>
<td>33.876</td>
<td>39.139</td>
<td>42.663</td>
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<td><strong>FTE R&amp;D Personnel</strong></td>
<td>27.003</td>
<td>27.698</td>
<td>28.964</td>
<td>38.308</td>
<td>39.960</td>
<td>49.252</td>
<td>54.444</td>
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<tr>
<td><strong>GERD/GDP (%)</strong></td>
<td>0.64</td>
<td>0.72</td>
<td>0.66</td>
<td>0.61</td>
<td>0.67</td>
<td>0.79</td>
<td>0.76</td>
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<tr>
<td><strong>GERD per capita (PPP$)</strong></td>
<td>40.5</td>
<td>43.8</td>
<td>42.8</td>
<td>41.6</td>
<td>51.4</td>
<td>60.7</td>
<td>68.3</td>
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## Academic Research Projects

### Recent Boost

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<th>2000</th>
<th>2001</th>
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<tr>
<td><strong>Project Proposals</strong></td>
<td>946</td>
<td>1149</td>
<td>1198</td>
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<td>1742</td>
<td>4203</td>
<td>4163</td>
<td>5005</td>
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<td><strong>Accepted Proposals</strong></td>
<td>335</td>
<td>421</td>
<td>549</td>
<td>338</td>
<td>480</td>
<td>1479</td>
<td>1366</td>
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<td><strong>Ongoing Projects</strong></td>
<td>843</td>
<td>1001</td>
<td>1242</td>
<td>1227</td>
<td>1353</td>
<td>2358</td>
<td>3160</td>
<td>3472</td>
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</table>
Statistics of Academic Research Projects

Proposal Applications vs. Funded Projects

*Public projects are included.
Ongoing Projects and Total Expenditure

1 YTL = 0.5 €

*Expenditure is deflated to 2005.
**Public projects are included.
Evaluation Method

- To cope with mounting interest and expectations of researchers, TUBITAK reviewed and revised its project evaluation system.

- Since 2004 a panel-based three dimensional evaluation method is adopted.
Three dimensional evaluation
(Ö. Ekici, ESF, Den Haag, March 10-11 2008)

1. intellectual/scientific/professional merit

2. expected impact of the anticipated outcome

3. feasibility of the research with the proposed research team, equipment/facilities and methods
Need for Post-Evaluation (General)

• To assess the effects of technology policies and programs

• To learn from the past and improve the funding and follow-up processes

• To justify the continuation of those policies to a sometimes skeptical audience
TUBITAK’s Goals

- Improve the quality of proposals
- Control the quantity of proposals
- Evaluate the effectiveness and impact of projects
- Provide feedback to future project funding policy adjustments and improvements
Measures of Success

Academic research projects

- **Output** (Final Reports)
- **Outcome** (Publications, Theses, IP)
- **Impact** (ST Indicators)
R&D Funding

Funded vs. Completed Projects

*All project types are included.
Reports describe the research activities using the criteria in the three-dimensional evaluation method.

Typical indicators:

- Contribution to Science and Technology
- Contribution to Career Development
- Public and Media Interest
• The scientific papers published as the outcome of funded projects (number of acknowledgements)

• The number of accesses to the final reports for the projects supported by TUBITAK

• The number of MSc and PhD theses written as a result of projects funded by TUBITAK
Questionnaire Used to Collect Data

• Type of publication-conference, journal, survey, etc.

• Number of graduate degrees, theses and dissertations

• Number of citations received and classification of publications (journal’s impact factor)

• Patents applied for and/or granted
**Forms Used to Collect Data (Sample)**

**Scientific Publications**

<table>
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<tr>
<th>PROJE BİLGİLERİ</th>
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<td>PROJE NO :</td>
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<td>YAYIN TÜRÜ</td>
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<td>[ ] MAKALE</td>
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| YAYIN TÜRÜ | YAYIN/KITAP/BİLDİRİ ADI | YAYINLANDIĞI DERGI/KITAP | ISSN NO | YER ALDĠĠI INDEX | BASIN YILI | CİLT/ SAYFA NO | BİLDİRİNIN SUNULDĠĠI ETKĠNLĠK ADI | ALDIGI ATĠF SAYISI |
| [ ] MAKALE | [ ] KITAP | BİLDİRĠ | [ ] POSTER | [ ] SÜZĠLU SUNUŞ | [ ] SCI | [ ] SSCI | [ ] A&HCI | [ ] Ulusel | [ ] Uluslararası | ETKĠNLĠK ADI: |

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**FORMU DOLDURANIN ADI SOYADI :** | **PROJEDĠKİ GÖREVİ :** | **T.C. KIMLIK NO :**

*Not : Birden fazla projenin olması durumunda bu formu çoğalatabilirsiniz. Ayrıca bir projeye ilgili birden fazla yaygın olması durumunda da yayın bilgilerini çoğalatabilirsiniz.*
Contribution to Science and Technology

NUMBER OF PUBLICATIONS IN TURKEY BETWEEN 1981-2006
Number of Acknowledgements to TÜBİTAK in Scientific Papers

- 2003: 370 Final Reports, 4 Acknowledgements
- 2004: 337 Final Reports, 437 Acknowledgements
- 2005: 426 Final Reports, 558 Acknowledgements
- 2006: 559 Final Reports, 1470 Acknowledgements
- 2007: 907 Final Reports, 3043 Acknowledgements

Legend: Yellow = Final Reports, Green = Acknowledgements to TÜBİTAK
The number of MSc and PhD theses written as the outcome of the projects is monitored.
Contribution to Career Development

- 2000: 15 MSc, 9 PhD
- 2001: 27 MSc, 7 PhD
- 2002: 26 MSc, 11 PhD
- 2003: 36 MSc, 8 PhD
- 2004: 25 MSc, 22 PhD
- 2005: 47 MSc, 11 PhD
- 2006: 64 MSc, 20 PhD
- 2007: 76 MSc, 38 PhD

- MSc Thesis
- PhD Thesis
Media coverage of the project outcomes is not sufficient.

However, TUBITAK has been organizing events to highlight success stories of the project outcomes.
Success Stories

Project Title: Creating Wide Band Infrared Light in Nanofibers

- One of the articles from this project is published in “Nature Materials” (6, 336 - 347 (2007)) and announced from the cover of the journal.

Administrator Organization:
- Bilkent University

Beginning Date of the Project:
- 01.06.2006

Project Duration:
- 24 months
Success Stories

**Project Title:** The Solution of Biggest Electromagnetic Integral Equation

- The coordinator of the project, L. GUREL, won World Record in Computational Electromagnetics: solution of an integral-equation problem involving 85 million unknowns

**Administrator Organization:**
- Bilkent University

**Beginning Date of the Project:**
- 01.06.2006

**Project Duration:**
- 36 months
Success Stories

**Project Title:** Nanocrystal Additive Original Devices for Optoelectronic Applications

- One of the articles from this project is published in “Nanotechnology” which is the first journal in field of interdisciplinary nanoscience and nanotechnology. The article is announced from the cover of this journal.

- The coordinator of the project, H.V. DEMİR win European Young Investigators Award-EURYI in 2007.

**Administrator Organization:**
- Bilkent University

**Beginning Date of the Project:**
- 01.09.2006

**Project Duration:**
- 36 months
Project Title: Evaluation of the Eirenis (Reptilia: Serpentes) Types in the East Mediterranean (Hatay, Osmaniye, Adana, Mersin, Kilis ve Gaziantep)

- Professor Kurtuluş Olgun and academicians from Adnan Menderes University discovered a new snake type, which is unknown in the world, as a result of their studies funded by TUBİTAK.

- They named this new snake type as *Rhynchocalamus barani* Olgun et al, 2007. Professor Kurtuluş and other researchers in the project published their findings in Zootaxa (Zootaxa 1399:57-68, 2007).
Success Stories

**Project Title:** Building Control, Measurement and Protection System Design for Hydroelectric Stations (HESKON Project)

Administrator Organization:
- TÜBİTAK-UZAY

Beginning Date of the Project:
- 01.07.2006

Project Duration:
- 24 months
Next Steps

• Development of cohesive post-evaluation criteria for assessing and improving the effectiveness and impact of funded projects

• Design, implementation and automation of a project post-evaluation system
Thanks.....

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ACADEMIC RESEARCH FUNDING PROGRAMS DIRECTORATE

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