



Republic of Turkey
Ministry of Science, Industry and Technology
Directorate General for Science and Technology

Impact Evaluation of the R&D and Innovation Support Programs

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1. R&D and Innovation Support Programs

2. Performance Index Studies

3. Impact Evaluation Studies



1. Institutional Structures

- Technoparks
- Business Sector R&D Centers

2. Project based R&D Supports

- Technological Entrepreneurship Start-up Support
- University-Industry Cooperation Support
(Industrial Thesis)
- Technological Products Marketing&Promotion
- Technological Products Investment Support



Technopark Performance Index (2012)

- Made public by the Minister in Feb 2014
- Rankings, points (for 30 parks) and methodology are on the website of the Ministry
- 2nd experience, first index was done with 2011 data
- 54 indicators were normalized and standardized
- Min-Max method, 100 point for max, 50 for median, 0 for min, others are interpolated
- All indicators and dimensions were given weights taking into account the views of managing companies and experts



Technopark Performance Index (2012)

Dimension 1: Ministry supports & expenditures of the Managing Company (16%)

- 1.1: The supports for the Managing Company
- 1.2: Exemption for firms
- 1.3: The expenditures of the Managing Company
- 1.4: The local development level

Dimension 2: R&D Competence (29%)

- 2.1: R&D Projects
- 2.2: The R&D expenditures of the firms
- 2.3: The domestic incomes of the firms



Technopark Performance Index (2012)

Dimension 3: Export performance and firm composition (20%)

- **3.1: The export value of the firms**
- **3.2: The compositions of the firms (start-up, academic spin-off, foreign firms)**

Dimension 4: Intellectual Property Rights (12%)

- **4.1: Domestic patent applications**
- **4.2: Domestic patents granted**
- **4.3: International patent applications**
- **4.4: International patents granted**
- **4.5: Triadic patents granted**
- **4.6: Utility models granted**



Technopark Performance Index (2012)

Dimension 5: Incubation services (8%)

- **5.1: Incubation programs services**
- **5.2: Number of interns**
- **5.3: Number of students**

Dimension 6: Collaboration and Interaction (15%)

- **6.1: University- industry collaboration**
- **6.2: Collaboration between the firms**
- **6.3: International collaborations**
- **6.4: Publicly supported R&D projects**



R&D Centers Performance Index (2012)

- **Made public by the Minister in March 2014**
- **Top 3, Sectoral leaders (for 14 sectors) and methodology are on the website of the Ministry**
- **1st experience**
- **28 indicators were normalized and standardized**
- **Min-Max method, 100 point for max, 50 for median, 0 for min, others are interpolated**
- **All indicators and dimensions were given weights taking into account the views of R&D centers, academicians and experts**



R&D Centers Performance Index (2012)

Dimension 1: R&D Personnel Employment (28%)

- 1.1: R&D Personnel
- 1.2: Researchers with a PhD degree
- 1.3: Researchers with a master degree
- 1.4: Researchers with an undergraduate degree
- 1.5: Researchers attending a PhD programme
- 1.6: Researchers attending a master programme

Dimension 2: R&D Expenditures (18%)

- 2.1: R&D expenditures
- 2.2: Increase in R&D expenditures per R&D personnel
- 2.3: Tax incentives



R&D Centers Performance Index (2012)

Dimension 3: R&D Projects (21%)

- **3.1: Completed R&D Projects (Budget, Number, Company Contribution)**
- **3.2: Current R&D Projects (Budget, Number, Company Contribution)**

Dimension 4: Cooperation and Interaction (8%)

- **4.1: R&D projects with public support (Budget, Number)**
- **4.2: Other R&D projects with university-industry cooperation (Budget, Number)**



R&D Centers Performance Index (2012)

Dimension 5: Commercialisation (12%)

- **5.1: Increase in profitability**
- **5.2: Increase in exports**
- **5.3: Revenue from new products/services**

Dimension 6: (Intellectual Property Rights (13%))

- **6.1: Domestic patent applications**
- **6.2: Domestic patents granted**
- **6.3: International patent applications**
- **6.4: International patents granted**
- **6.5: Triadic patents granted**
- **6.6: Utility models granted**

Impact Evaluation Studies



Technological Entrepreneurship Start-up Support

- **Survey of 7 pages (Qualitative-Likert Scale, Quantitative, Open Ended questions)**
- **Sent to 452 beneficiaries by e-mail**
- **Response 172 (rate %38)**
- **33 of them closed their business (%19)**
- **71 (out of 139 active) are established in technoparks (%51)**

Impact Evaluation Studies



University-Industry Cooperation Support (Industrial Thesis)

- For the academician, Survey of 4 pages (Qualitative-Likert Scale, Quantitative, Open Ended questions)
- For the company, Survey of 6 pages
- Sent to 134*2 beneficiaries by e-mail
- Response 61 academician + 43 company (rate %38)

Impact Evaluation Studies



Technopark firms and Technopark Managing Company

- **For the firms, Survey of 17 pages (Qualitative-Likert Scale, Quantitative, Open Ended questions)**
- **For the Managing Company, Survey of 14 pages**
- **Online Survey**
- **Response from 1786 firms (out of 2000), rate %90**

Impact Evaluation Studies



Quantitative Impact Evaluation- Policy Learning Process

- **World Bank repository**
- **Previous studies in Turkey**
- **OECD meetings**
- **Support from academicians and NGOs such as TTGV**
- **Identifying the methodology**
(Matching, Difference in Difference, t-Test)
- **Accessing data (Turkstat, Administrative Data)**

Conclusions



- **Data gathering takes time, but policy learning starts with that**
- **Learning not only by yourself or your department/ institution alone, but together with other institutional partners is the key**
- **Keep doing regular meetings/summit and consultations with the partners**
- **Institutional capacity building is important: There is a process now to set up an “Impact Evaluation Department” in the Directorate General for Science and Technology)**



Thank You ...

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