Building the Knowledge Economy

(in times of crisis)

Costas Fotakis
Alternate Minister for Research & Innovation
A central issue:

The development of a new production model for Greece which is placing emphasis on the Knowledge Economy
The innovation gap

Greece ranks within the first 25 countries (among 186) in terms of Scientific output (e.g. high quality publications).

But, is a “moderate innovator” scoring an Innovation Index of 68 vs 100 which is the EU average in 2016.
The **PRIMA** initiative fits our strategy for Development based on the Knowledge Economy
The **Knowledge** in the Knowledge Economy

- **Demand driven Research** meets the market needs of today
  - It is primarily transactional, short term and visible
  - It supports the needs of **current** economy

- **Supply-side, i.e. scientific curiosity-driven Research** addresses the needs of tomorrow
  - It **transforms** the economy and has long-term perspectives
  - Breakthroughs are accumulative with potential high added value and major impacts in real economy and society

The pursuit of scientific quality and excellence is a necessary condition for success
The role of the State:

• “Enabler” of research opportunities and the environments for their implementations - capacity maintenance and capacity building

• “Supporter” and “Regulator” for realizing what CANNOT be done by the private sector

• “Inspirer” of flagship initiatives in emerging sectors of high added social, scientific and economic values
The most important asset: **PEOPLE!**

The human capital, especially young scientists, is the most important asset for building up the Knowledge Economy.

**However,**

During the years of crisis the working conditions, the high unemployment and most important the limited career prospects have led to an increase of **brain drain**, as well as **brain waste**.

Our aim is to reverse the **brain drain** and replace it by a healthy **brain circulation**!

Also, to strengthen the links with the **scientific diaspora**!
Data for the **brain drain during the year of crisis**

**Brain Drain in the Crisis Years**

Greeks depart on Odyssey for jobs

<table>
<thead>
<tr>
<th>Country</th>
<th>Net gain or loss of talent between 2009 and 2014</th>
</tr>
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<tbody>
<tr>
<td>UK</td>
<td>45,000</td>
</tr>
<tr>
<td>Italy</td>
<td>40,000</td>
</tr>
<tr>
<td>Finland</td>
<td>35,000</td>
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<tr>
<td>Germany</td>
<td>30,000</td>
</tr>
<tr>
<td>France</td>
<td>25,000</td>
</tr>
<tr>
<td>Portugal</td>
<td>20,000</td>
</tr>
<tr>
<td>Spain</td>
<td>15,000</td>
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<tr>
<td>Greece</td>
<td>10,000</td>
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<td></td>
<td>0</td>
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</tbody>
</table>

- The chart calculates the difference between professionals seeking to leave the country and professionals seeking to come into the country. A negative number indicates more people seeking to leave than those seeking entrance.

(Ref: Bloomberg, June 2015)

- **2000-2005**: 2.552 young scientists immigrated
- **2009-2014**: 20.281 young scientists immigrated
What should be done (or is done)

- Create new **stimulating** research/academic careers
- Create scientific and entrepreneurial environments and conditions which are **attractive** for young scientists as well as prominent researchers
- Create **funding opportunities** for start-ups and innovative entrepreneurship adapted to the particularities of the economic landscape
- Encourage jobs for highly skilled personnel in the private sector with emphasis in R&D Departments of innovative companies

The brand name counts:

**Excellence attracts excellence!**
Funding possibilities
Research is usually a prime target for cutbacks!

Public Expenditure
• Serious limitations due to the austerity measures but ~30% increase of the regular budget in 2016
• In 2015 the R&D expenditure reached 0.97% of GDP

HORIZON 2020
Strongly competitive but very good performance so far. Greece ranks 10th.

Structural Funds 2014-2020
- Serious hold-ups due to thematic and geographic limitations but high available funds (~1.2 b€ for 2014-2020)
- At least 9000 scientists will be benefited!
A new initiative:

The Hellenic Foundation for Research and Innovation (HFRI)

- A new long term Institution with an initial additional budget of **240 M€** for capacity building through blue sky research during 2017-2019
- Mix of **public (60M€)** and **EIB (180M€)** funds
- Adaptable to the particular needs for Research
- Continuity and consistency of funding
- Complementarities to Structural Funds (no thematic and geographic criteria)
- Openness and pursuit of international collaborations.
Building up a Knowledge Economy: Opportunities for innovative companies

The establishment of a Fund-of-Funds for equities capital supply

- A PPP initiative involving the EIF and an initial investment of 260 M€
- Transforming Research ideas into start-ups through the “Innovation Window”
- Incubators, TTO, Accelerators, seed capital and equities
- Operation at regional level
Towards a Knowledge Economy

Development Organization (connecting with GSRT/HFRI)

- **HFRI Grants** (Public, EIB) - 240 M €
- **GSRT Grants** (SF) - 1,2 B €
- **Technology Transfer & Acceleration Equity Funds** (SF, EIF) - 80 M €
- **Early stage Capital Equity Funds** (SF, EIF) - 100 M €
- **Growth Capital Equity Funds** (SF, EIF) - 80 M €

Private Funds

Mature business stage
(low interest loans and equities)

Public Funds

Uncertainty / Risk

Time

Costas Fotakis, Alternate Minister, Research and Innovation
fotakis@minedu.gov.gr
Flagship Initiatives (a top down approach)

**Culture:**
Culture, Cultural Heritage, Science and Technology

**Life Science and Health:**
Precision Medicine: Personalized medicine for Prevention and Therapy

**Agrofood:**
- Advanced genomic technologies for diagnostics, verification, standardization and improvement.
  “The roads of vineyards”
  “The roads of olive groves”
  “The roads of bees”
A key issue

Openness and international collaboration are important elements for maximizing mutual benefits of Knowledge Economy.

The Prima Euro-Mediterranean programme for joint ventures in Agrofood and Water supplies management
Our vision:

To create a Knowledge Economy by releasing the human potential and talent without lock-ups and interventions and promoting joint ventures in vibrant scientific and entrepreneurial environments.