

# Intellectual Capital in Portugal: from academic talk to governmental action

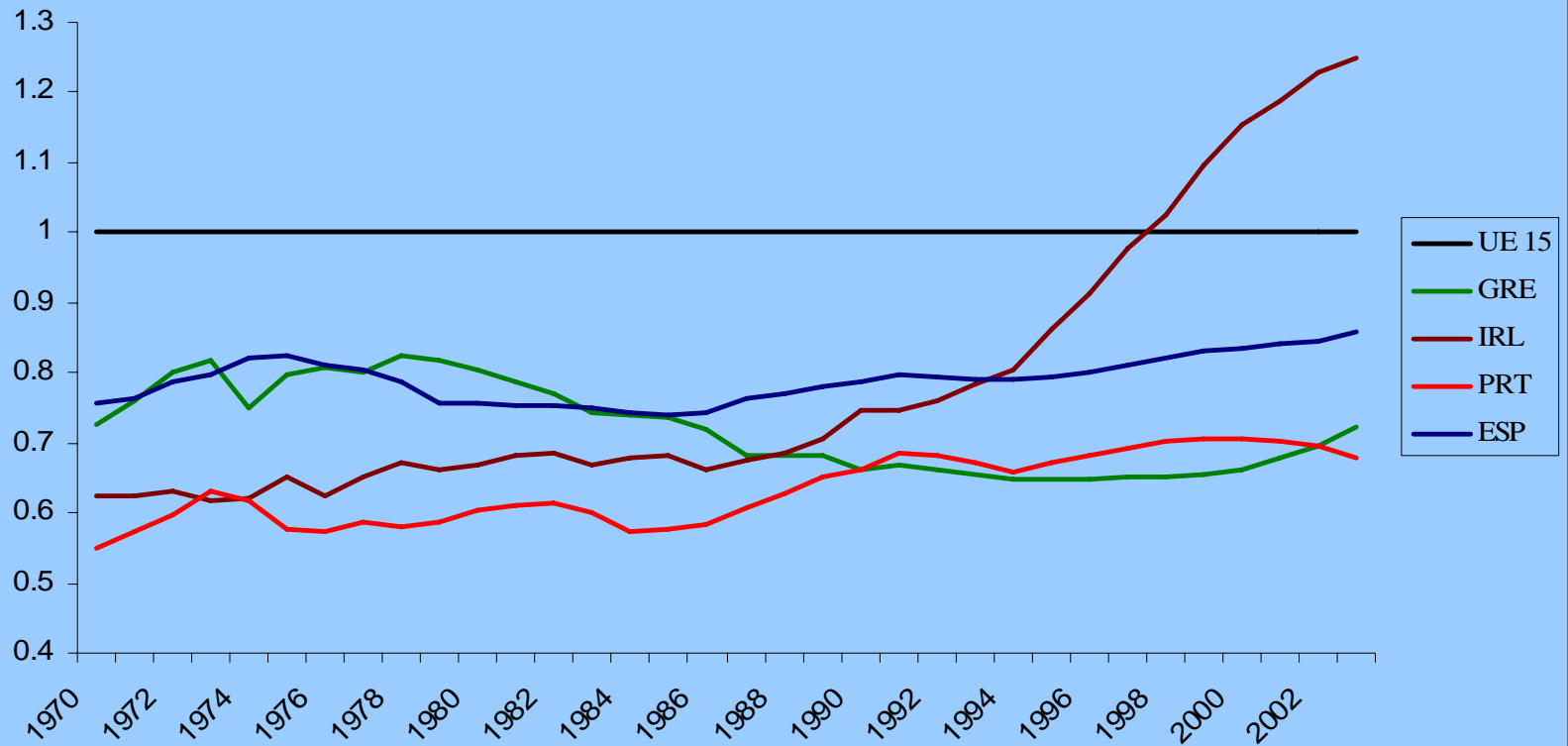


Technological Plan Coordination Unit  
Prof. José Pinto Duarte

# Economic Context

In the last few years, the Portuguese economy showed **difficulties in enduring sustainable growth** at pace faster than its richer, European counterparts, thereby jeopardizing the process of **real convergence**.

# GNP at PPP



Source: OCDE

# Economic Context: the bad news

Relocation of foreign companies to Eastern Europe

Fierce competition from Far-eastern Countries

Closing of Portuguese companies in traditional economic sectors (textiles, shoes, etc.)

Increase in unemployment

# Economic Context: the bad news

Low research expenditure

Few researchers in the industry

Low number of graduates in S&T

Few number of patents

Few hi-tech products

Few hi-tech companies

# Economic Context: the good news

A slight change in this situation might have a strong impact on the problem

There are mechanisms, policies, and programs to tackle the technological problem at various levels, that have been developed over the years

# Economic Context: the good news

In spite of the poor growth, Portugal was one of the European countries that invested the most and one those that received a greater amount of money transfers from other EU countries and from its emigrants abroad.

# Challenge

It is necessary to focus on the **quality of the effort** to raise the economic growth index.

Improving the quality of the effort requires **technological progress and innovation.**

In other words, it requires **using the existing resources in a more efficient way and producing added value goods,** thereby generating greater richness



# Economic growth

In the short run, economies may grow in two ways: by raising capital investment or by increasing technological progress.

Only technological progress results in sustainable economic growth.

# Economic Growth

Technological progress results from the adoption of **new technologies**, new forms of **corporate organization**, and new ways of **public administration**.

Or from any other form of production that permits to obtain greater value using the same resources.

# Sustainable Growth Policies

The role of the state in promoting technological progress is to foster better forms of production by promoting free competition and an open market, and by coordinating private and public expectations and opportunities.

This is a modest role as technological progress mainly stems from private motivation and action.

# The Technological Plan

To perform such a role, the Portuguese government created a **Technological Plan** and its **Coordination Unit**.

# What is The Technological Plan?

The Technological Plan is a **set of governmental measures** concerned with promoting sustainable economic growth.

The Technological Plan includes the **design and the implementation of sustainable growth policies** geared towards technological progress.

# What is The Technological Plan?

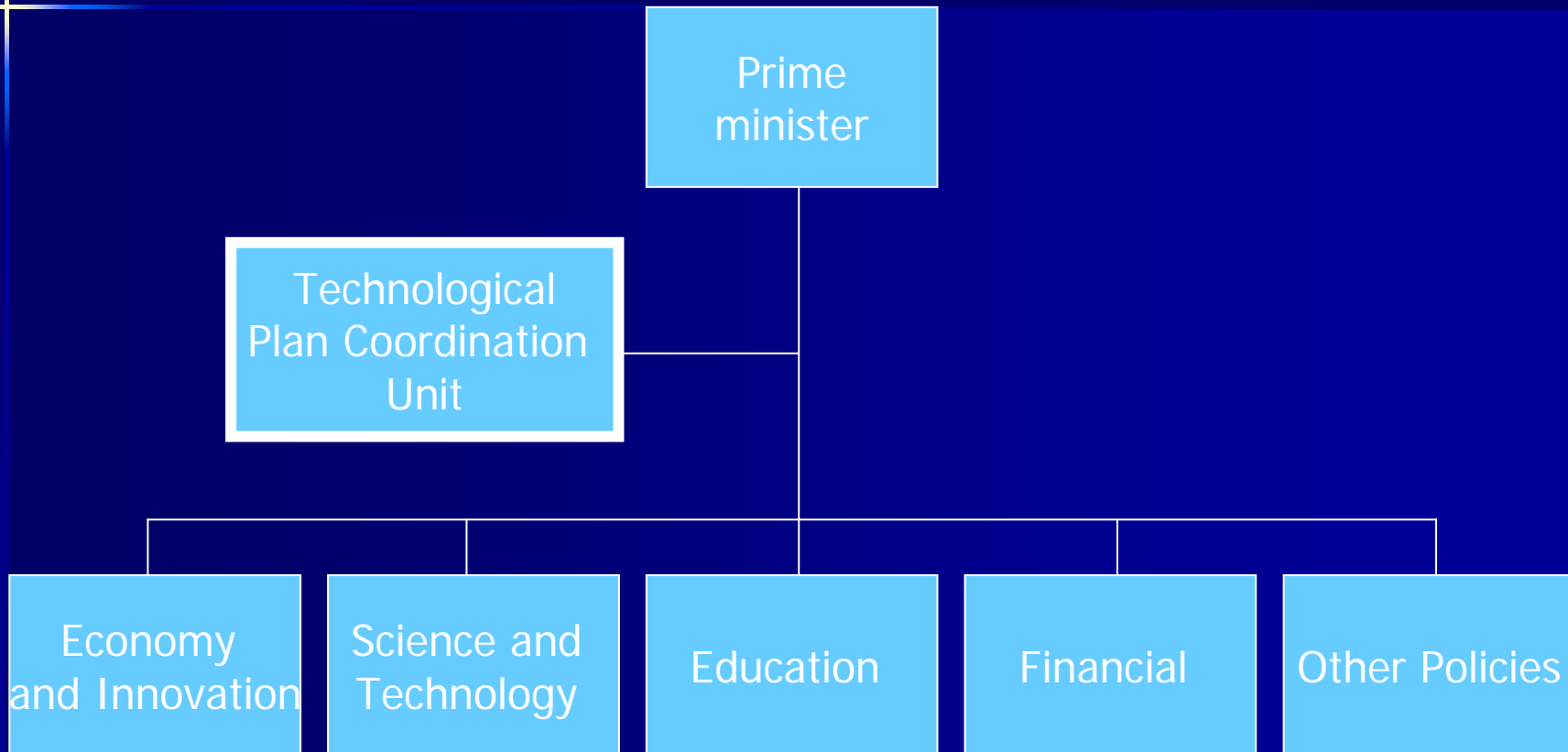
The Technological Plan aims at **creating the conditions** required for corporations and economic sectors to **generate added value** and **raise individual income**.

The **goal is NOT** to increase public expenditure and governmental intervention.

# What is the Technological Plan Coordination Unit?

The unit is a think-tank with the technical skills required for contributing for sustainable economic growth, technological progress, and qualified employment in Portugal

# Organizational structure: diagram





# Organizational structure: advantages

Political support from prime-minister

Involvement of different ministers

Coordination of policies

# Organizational structure: advantages

Articulation of the various support programs:

- . III European Framework Program (2000-06)  
Education; Employment, Formation, and Social Development; Science, Technology and Innovation; Information Society; Health; Culture; Agriculture and Rural Development; Fishing; Economy; Accessibility and Transportation; Environment
- . IV European Framework Program (2007-13)

# What is the Unit's main goal?

To **design, propose, and promote** economic policies that stimulate **innovative economic activity** and that prepare the Portuguese economy for a **competitive and uncertain economic context**.

# Which type of policies?

Those that promote the:

- creation and development of **innovative companies** based on new technologies,
- the generation of **qualified employment**,
- an improved relation **corporations - public administration**,
- the technology transfer **university → industry**.

# What is the Unit's accessory goal?

To transmit to the Portuguese society the **need for change and innovation** at the individual, corporate, and public administration levels.

# The Unit's Technical Mission

To re-organize **existing programmes** and to develop **new ones**.

To coordinate the work of the different ministries.

To promote “flag projects” with the potential for triggering the transformation of the Portuguese companies and economy.

# Methodology: 1st step

**Diagnosis** of the portuguese situation including:  
survey of existing programmes  
detection of constraints to economic growth

**Benchmarking** of international solutions

Estimated duration: 6 months

# Methodology: 2nd step

Take **specific actions** targeted at removing constraints to economic growth.

**Disclosure of such actions** to call public attention for their advantages and to gain support.

Estimated duration: it depends on each action.



# Methodology: 3rd step

**Monitoring** the implementation of the proposed measures by the government and **assessment** of their impact on the overall society

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# Workplan

1. Check the **use of European funds** for innovation (in Portugal and abroad)
2. Re-organization and fostering of the **national innovation system**, concerning the creation and funding of innovative companies
3. Promotion of **R&D** and their translation into **value generating** initiatives.

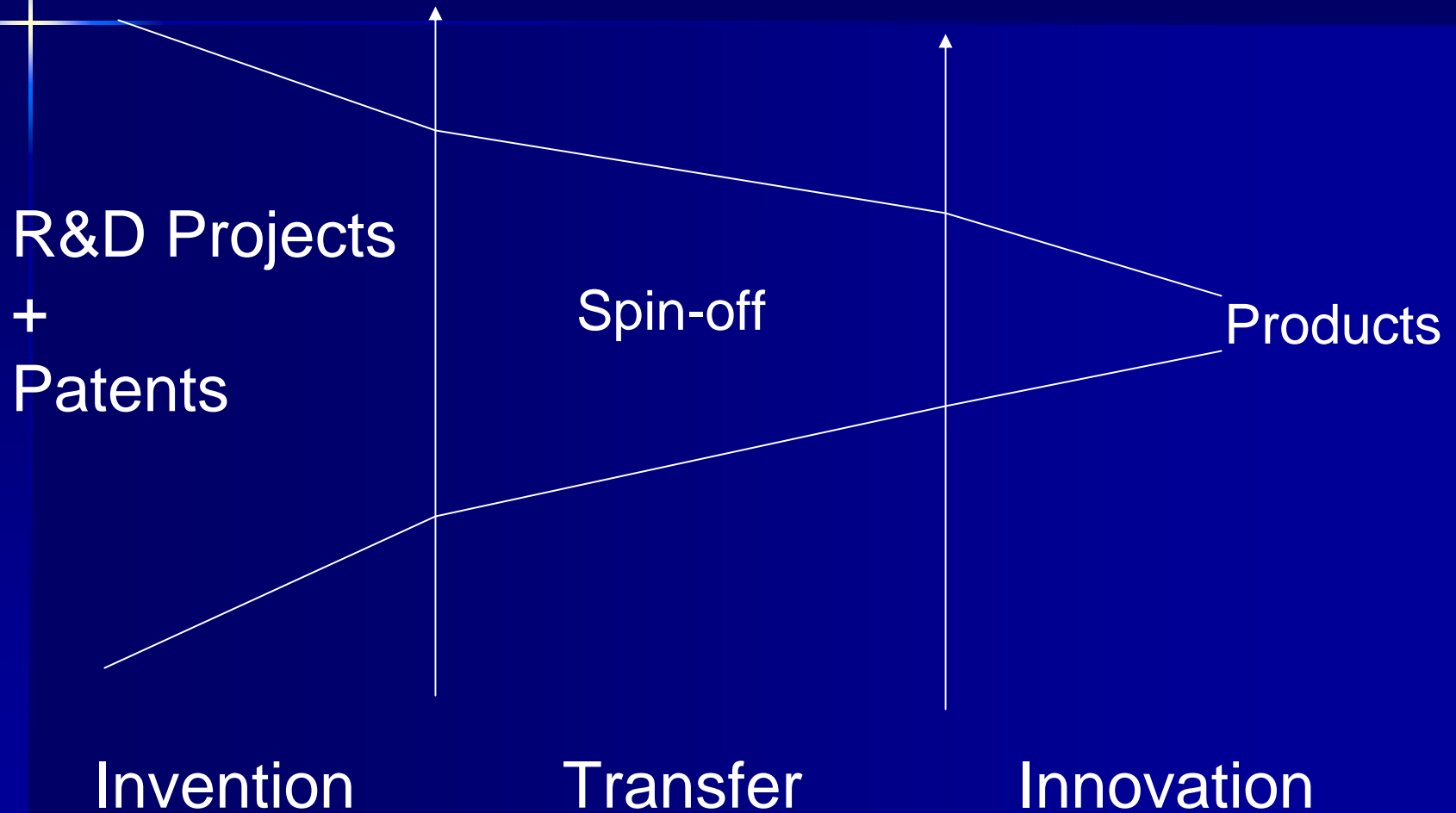
# Work plan

Survey of **available innovation programs** and resources at the national, European, and international levels.

Mapping of relations among them to facilitate:

- . the **rationalization of national programs**
- . the **access** of Portuguese companies to **international ones**

# e.g.: Technological Transfer Cycle



# e.g.: Technological Transfer Programs

FCT-National Foundation for Science and Technology

B.Arch, Master, Ph.D., Post-doc scholarships

Research Projects Grants

AdI-Innovation Agency

Placement of Ph.D. researchers in companies

Partial placement of university researchers in companies

Creation of Spin-offs

Seed and venture capital competitions

Technological Centers Network

Support R&D in companies that belong to specific clusters of economic activity

GAPI Network

University and industry-based intellectual property registration offices

OTIC Network

Technology transfer offices – IP licensing, production, and marketing

NEOTEC Initiative

Financial and technical support to the creation of new, tech-based companies

Excellence Centers Network

Stimulate the development of economic cluster research projects

Commercialization of Inventions Program

Financial and technical support to the commercialization of inventions

Etc...

## e.g.: Technological Transfer Measures

Web site that integrates all the information regarding available and new programs

Network of offices that integrate representatives of all the institutions that manage tech transfer programs

# Intervention Areas

1. Innovation within the European framework
2. Human Resources
3. Technology
4. Capital
3. Research Institute and School of Business and Technology
5. Compensations from large contracts
6. Public administration and business firms

# Intervention Areas

7. Criteria for public policies
8. Foreign direct investment
9. Creative enterprises
10. Innovation initiatives
11. International advisory board
12. Conference on "Innovation and Society"



# Monitoring Board

- Production of an **annual public report** on activities
- Feedback from a national and an international **advisory board**

# Summary

The Unit's success will depend on its:

technical capacity

ability to gather resources

ability to stimulate cooperation

ability to communicate and defend its policies

ability to maintain its autonomy

# Contacts

Unidade de Coordenação do Plano Tecnológico  
4 Rua Laura Alves, 9º, 1050-138 Lisboa, Portugal  
Telf.: +351 (21) 799 8012/3

José Albuquerque Tavares, Coordinator  
[jatavares@ucpt.gov.pt](mailto:jatavares@ucpt.gov.pt)

José Pinto Duarte  
[jduarte@ucpt.gov.pt](mailto:jduarte@ucpt.gov.pt)