



Findings from knowledge transfer office surveys

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Introduction

■ Objectives:

- R&D is a vitally important input for innovation and consequently for improving productivity and the quality of life
- A substantial share of research in the public sector has immediate or potential commercial value
- For several decades, the goal of many governments has been to improve the transfer of knowledge (KT) from the public research sector to private firms
- To encourage and support KT activities many public research organisations (PROs) have established Knowledge Transfer Offices (KTOs) that can provide professional advice



Introduction

■ Objectives:

- These KTOs collect data that can be used to construct indicators for the KT activities of the PROs that they serve
- The recognition of the value of such data has led to efforts by associations of technology managers, such as ASTP and PROTON in Europe and AUTM in the United States to survey their member to collect relevant data
- Unfortunately none of the European surveys were able to obtain responses from the leading PROs



Knowledge transfer office survey

- **Goal of this survey:**

- KTO survey over a two year period (2010-2011) among each of the 27 member states of the European Union and in the 12 Associated states¹.
- The main objective is to obtain internationally comparable indicators of KT activities by the **leading** European public research organisations (PRO) by surveying the **leading** PROs in each of the 39 countries
- Number of PROs per country are based on the share of the total expenditures on government and higher education R&D in the 39 countries.

¹These include the four EFTA members (Iceland, Liechtenstein, Norway and Switzerland) plus Albania, BosniaHerzegovina, Croatia, Israel, Macedonia, Montenegro, Serbia, and Turkey.



Knowledge transfer office survey

- **Goal of this survey:**

- Many different surveys in EU, and we try to obtain as much results as possible from other sources but we are often unable to obtain comparable data in a timely manner due to confidentiality and other restrictions
- Nevertheless we do use other data sources with which we have been able to establish collaborations
- These are national associations of technology managers in Spain (RedOTRI), Portugal (UTEN), France (CURIE) Denmark (TechTrans), United Kingdom (HEFCE) and with ASTP.
- However often not identical questions asked



Knowledge transfer office survey

■ **Data basis 2010:**

- KTO survey 402 out of 705 replies (response rate of 57%). 71 PROs not eligible for analysis.
- Added results for 60 PROs from HEFCE survey for the UK, and results for 39 PROs from RedOtri survey for Spain
- Total of 430 PROs for analysis.

■ **Data basis 2011:**

- KTO survey 386 out of 747 replies (response rate of 52%). 61 PROs not eligible for analysis.
- Upcoming months: additional results for UK, SP, FR, PT and DK.
- Today's presentation results for 325 PROs.



Knowledge transfer office survey

- Performance per 1,000 research staff

	Universities	Other research organisations	Total	East med. countries
Invention disclosures	15.2	22.1	16.6	20.6
Patent applications	7.8	7.5	7.7	9.4
Patent grants	6.1	5.2	5.9	13.8
USTPO patent grants*	1.6	0.8	1.4	0.0
Start-ups established	1.5	1.2	1.4	0.0
Successful start-ups	1.9	1.7	1.9	1.9
License agreements	6.0	6.2	6.0	0.0
License income (million €)	0.8	0.2	0.6	0.0
Research agreements	99.9	93.1	98.4	48.8
Total number of reported research staff	334,199	81,511	415,710	1,253

- East Mediterranean results suggest that there is room for improvement when it comes to commercializing research in e.g. start-ups, licenses and R&D agreements



Knowledge transfer office survey

- Million Euros to produce 1 output

	Universities	Other research organisations	Total	US
Invention disclosures	4.0	2.7	3.7	2.2
Patent applications	8.0	7.3	7.9	3.7
Patent grants	10.0	13.1	10.4	10.1
USTPO patent grants ¹	33.1	58.5	36.3	NA
Start-ups established	35.6	46.0	37.0	69.1
Succesfull start-ups	29.8	24.5	28.8	NA
License agreements	10.2	9.7	10.2	8.4
License income (million €)	84.8	186.8	92.3	24.6
Research agreements	0.6	0.5	0.6	NA
Total reported research expenditures (million €)	17,432	2,807	20,239	44,994

- US PROs outperforms EU PROs on almost all indicators except for start-ups

1: To compare patent grants, with the US the number for USTPO patents grants from the US is placed in the row patent grants.



Knowledge transfer office survey

- Performance *over time* per 1,000 research staff (**panel data**)

	Universities		Other research organisations		Total	
	2010	2011	2010	2011	2010	2011
Invention disclosures	13.77	16.44	19.06	16.67	14.59	16.48
Patent applications	7.30	8.79	6.34	5.86	7.16	8.26
Patent grants	8.50	8.99	3.13	4.47	7.60	8.18
USTPO patent grants	2.00	2.05	0.74	0.70	1.78	1.82
Start-ups established	1.53	2.14	2.44	1.20	1.65	1.98
Successful start-ups	3.32	3.13	1.58	1.73	2.98	2.86
License agreements	9.20	7.31	3.53	4.24	8.35	6.75
License income (million €)	0.75	0.91	0.16	0.29	0.66	0.79
Research agreements	68.65	78.80	44.38	38.46	64.27	71.19

- Panel data set of 191 PROs. 160 Universities have in general performed better in 2011 except for successful start-ups and license agreements



Knowledge transfer office survey

■ Role KTO office in performance

- Regression analysis based on 2010 data
- Very important role for number of KT office staff
- Strong argument for supporting well-funded KT offices
- East Med. countries; average KTO staff FTE: 4.5 vs. EU: 8.2

	Invention disclosures	Patent applic's	Patent grants	Start-ups	Licenses	Research agreements	License income
Number of researchers	+++	+++	+++	+++	++	+++	+++
Number of KT office staff (FTE)	+++	+++	+++	ns	+++	++	+++

Ns = no significant effect, ++ = positive effect and $p < .05$; +++ = positive effect and $p < .001$



Further information

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For more information please visit and download interim findings report 2011 at:
<http://www.knowledge-transfer-study.eu>

Knowledge Transfer Study 2010-2012
Monitoring study regarding the implementation of the Commission Recommendation and Code of Practice on the management of intellectual property in knowledge transfer activities in Member States and Associated Countries.

The purpose of the Knowledge Transfer Study 2010-2012 is to support the monitoring and reporting process of the European Commission's Recommendation and Code of Practice on Knowledge Transfer.

Europe seems to be better at producing high-level knowledge than at converting it into socio-economic benefits. In addition to the classical modes of transfer and dissemination of knowledge, such as research publications and exchanges of researchers, Public Research Organisations and Universities performing research need to more actively engage in the exploitation of publicly-funded research results, for instance through academia-industry collaborations, licensing and spin-offs.

In April 2008, the European Commission adopted a Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations. The aim was to offer a coherent framework for the management of intellectual property by the public research sector, to promote knowledge transfer between the public and private sectors, both within and between Member States.

In order to follow-up and promote the implementation of this Recommendation and Code of Practice, a monitoring and reporting system is being set up.

Interim findings 2011
The interim findings of the Knowledge Transfer Study for surveys and workshops conducted in 2011 are available in a long and a short report.

[Download Interim Report \(short version\) \[PDF, 0.8 MB\]](#)
[Download Interim Report \(long version\) \[PDF, 3.19 MB\]](#)

The Knowledge Transfer Study 2010-2012 is a service for the European Commission's DG Research and Innovation, based on contract number RTD-Dx-C/CC/2010/S2 56046