## Annex A

National periodic surveys and institutional data on patent applications and industry-university co-publications

Table A.1. Periodic or occasional surveys of knowledge transfer activities in universities, public research institutions (PRIs) and hospitals – selected OECD and non-OECD countries

Country	Most recent survey title	Survey organisation	Publication year	Reference year	First year data available	Responses	Universities	PRIS	Hospitals
Australia	National Survey of Research Commercialisation (NSRC) 2008-09	DIISR	2012	2010-11	2003-04	72	J	J	J
Canada <sup>1</sup>	Survey of Intellectual Property Commercialization in the Higher Education Sector	Statistics Canada	2010	2008	2005-08	101	J		J
Canada	AUTM Canadian licensing activity survey: FY2010	Canadian AUTM	2012	2011	2000	39	J	J	J
Denmark	Public Research Commercialisation Survey – Denmark 2010	DASTI	2011	2010	2000	14	J	J	J
Europe	The ProTon Europe Seventh Annual Survey Report	ProTon Europe	2012	2010	1991	320	J	J	J
Europe	Summary Respondent Report ASTP Survey for Fiscal Year 2008	UNU-MERIT for ASTP	2010	2008	2003	99	J	J	J
Norway	Indicators of the commercialisation of research: The case of Norway	NIFU	2008	1998-2004	1998	16	J	J	
Switzerland	swiTTreport 2011	swiTT	2011	2010	2005	21	J	J	J
United Kingdom	Higher education-business and community interaction survey 2011-2012	HEFCE	2013	2011-12	1999-2000	161	J		
United Kingdom	Sixth Annual Survey of Knowledge Transfer Activities in Public Sector Research Establishments (PSRES)	RIS	2011	2008-09	2003-04	132		J	J
United States	AUTM US licensing Activity Survey: FY2010	US AUTM	2012	2011	1991	186	J	J	J
Europe	Interim Findings 2011 of the Knowledge Transfer Study 2010-2012	Empirica, UNU-MERIT and FHNW for EC	2012	2010	2010	430	J	J	J
Italy	Potenziamo la cantena del valore	NetVal	2011	2009	2009	57	J	J	J
Spain	Informe de la encuesta RedOTRI 2009	RedOTRI	2012	2011	2003	65	J	J	J

Table A.1. Periodic or occasional surveys of knowledge transfer activities in universities, public research institutions (PRIs) and hospitals: Selected OECD and non-OECD countries (continued)

Country	Most recent survey title	Survey organisation	Publication year	Reference year	First year data available	Responses	Universities	PRIS	Hospitals
Ireland	2009 Irish Commercialisation Survey	Enterprise Ireland	2010	2009	2009	26	n/a	n/a	n/a
France	Les activités de recherche contractuelle et de transfert de technologie dans les établissements français d'enseignement supérieur	BETA for MESR	2010	2007	2003	111	J	J	J
Europe	The CEMI Survey of University Technology Transfer Offices in Europe	CEMI	2008	2007	2007	211	J		
China	Intellectual Property Report of Chinese Universities	MOE	2010	2009	2006	783	J		
Japan	State of University Technology Transfer in Japan	MEXT	2010	2009	2002	141	J		
Japan	Basic Survey Report on University Ventures	METI	2009	2008	2001	525	J	J	
Korea	Survey on University-Industry Cooperative Activities in 2010	NRF	2011	2010	2006	153	J		
Korea	Survey on the Technology Transfer of Public Research Institutes	MOTIE	2012	2011	N/A	275	J	J	J

#### Notes:

2. Survey Organisations: Australia – Department of Innovation, Industry, Science and Research (DIISR); Canada – Canadian Association of University Technology Managers (AUTM); Denmark – Danish Agency for Science, Technology and Innovation (DASTI); Europe – ProTon Europe; United Nations University - Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT) for the Association of European & Technology Transfer Professional (ASTP); Chair of Economics and Management of Innovation (CEMI); Empirica, UNU-MERIT and University of Applied Sciences and Arts Northwestern Switzerland (FHNW) for European Comission (EC); Norway – Nordic Institute for Studies in Innovation, Research and Education (NIFU); Switzerland – Swiss Technology Transfer Association (swiTT); United Kingdom – Higher Education Funding Council for England (HEFCE); Technopolis for the UK Department for Business, Innovation & Skills (BIS); United States – US Association of University Technology Managers (AUTM); Italy – Italian Network for the Valorisation of University Research (NetVal); Spain – Spanish Network of University Knowledge Transfer Offices (RedOTRI); France – Bureau d'Economie Théorique et Appliquée, Université Louis Pasteur de Strasbourg (BETA) for the Ministry of Higher Education and Research (MESR); People's Republic of China – Ministry of Education (MOE); Japan – Ministry of Education, Culture, Sports, Science and Technology (MEXT); Ministry of Economy, Trade and Industry (METI); Korea – National Research Foundation of Korea (NRF); Ministry of Trade, Industry and Energy (MOTIE).

*Source*: Updated and expanded from Finne et al. (2009), "Metrics for knowledge transfer from public research organisations in Europe: Report from the European Commission's expert group on knowledge transfer metrics"; Piccaluga et al. (2011), "ProTon Europe, The ProTon Europe Seventh Annual Survey Report (fiscal year 2009)".

<sup>1.</sup> The Statistics Canada survey was terminated in 2012.

Table A.2. Patent Co-operation Treaty (PCT) applications by top national universities

Rank	Applicant name	Country of origin	2009	2010	2011
1	University of California	United States	321	304	277
5	Korea Advanced Institute of Science and Technology	Korea	43	51	103
7	University of Tokyo	Japan	94	105	98
16	ISIS Innovation Limited (University of Oxford)	United Kingdom	45	46	62
22	Hebrew University of Jerusalem	Israel	33	43	51
25	National University of Singapore	Singapore	32	24	50
44	Technical University of Denmark	Denmark	38	24	36
44	Tsinghua University	China	27	24	36
48	University of Sydney	Australia	26	24	35

Note: Only one top university per country listed. For complete top 50 list, see source.

Source: WIPO (World Intellectual Property Organization) (2012), "PCT yearly review – The international patent system", WIPO Economics & Statistics Series.

Table A.3. Patent Co-operation Treaty (PCT) applicants by top national public research institutions (PRIs)

Rank	Applicant name	Country of origin	2009	2010	2011
1	Atomic Energy and Alternative Energies Commission (CEA)	France	238	308	371
2	Fraunhofer Society for the Advancement of Applied Research	Germany	265	297	294
3	French National Centre for Scientific Research (CNRS)	France	149	207	196
4	Agency of Science, Technology and Research	Singapore	148	154	180
5	Spanish National Research Council (CSIC)	Spain	86	126	120
6	China Academy of Telecommunications Technology	China	N/A	N/A	119
7	MIMOS BERHAD (MIMOS)	Malaysia	90	67	108
8	Electronics and Telecommunications Research Institute of Korea	Korea	452	174	104
9	National Institute of Advanced Industrial Science and Technology (AIST)	Japan	109	91	100
10	United States Department of Health and Human Services (HHS)	United States	107	113	98
12	Dutch Organization for Applied Scientific Research (TNO)	Netherlands	134	116	82
15	Council of Scientific and Industrial Research (CSIR)	India	63	56	53
18	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Australia	56	61	48
22	National Research Council Canada (NRC)	Canada	21	45	35
27	Technical Research Centre of Finland (VTT)	Finland	34	48	31

Note: Only one top institution per country listed. For complete top 30 list, see source.

Source: WIPO (World Intellectual Property Organization) (2012), "PCT yearly review – The international patent system", WIPO Economics & Statistics Series.

Table A.4. Industry-university co-publications (IUCs) by individual universities, publication years 2007-11

% of industry-university co-publications in total research publication output

University	Country of origin	% of IUCs	% domestic IUCs
Eindhoven University of Technology	Netherlands	15.6%	53%
Chalmers University of Technology	Sweden	14.0%	49%
Tokyo Institute of Technology	Japan	12.9%	77%
Technical University of Denmark	Denmark	12.8%	45%
Norwegian University of Science and Technology	Norway	11.4%	55%
Aalto University	Finland	11.4%	45%
George Mason University	United States	10.9%	54%
Pohang University of Science and Technology	South Korea	10.8%	69%
Paul Sabatier University	France	10.1%	43%
Medical University of Vienna	Austria	9.9%	16%
Politecnico di Milano	Italy	9.2%	51%
Dresden University of Technology	Germany	9.1%	47%
University of Basel	Switzerland	8.8%	23%
Imperial College London	United Kingdom	8.8%	25%
University of Leuven	Belgium	7.5%	16%

#### Notes:

- 1. The Leiden Ranking is based on data from the Web of Science database of Thomson Reuters. For methodology and computations:  $\underline{www.cwts.nl/pdf/UIRC\ Technical\ Notes\ 20130416.pdf.}$
- 2. Only one top university per country listed. For complete list, see source.

Source: Centre for Science and Technology Studies (CWTS), Leiden University, May 2013.



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