

# Innovációpolitikai fordulópontok

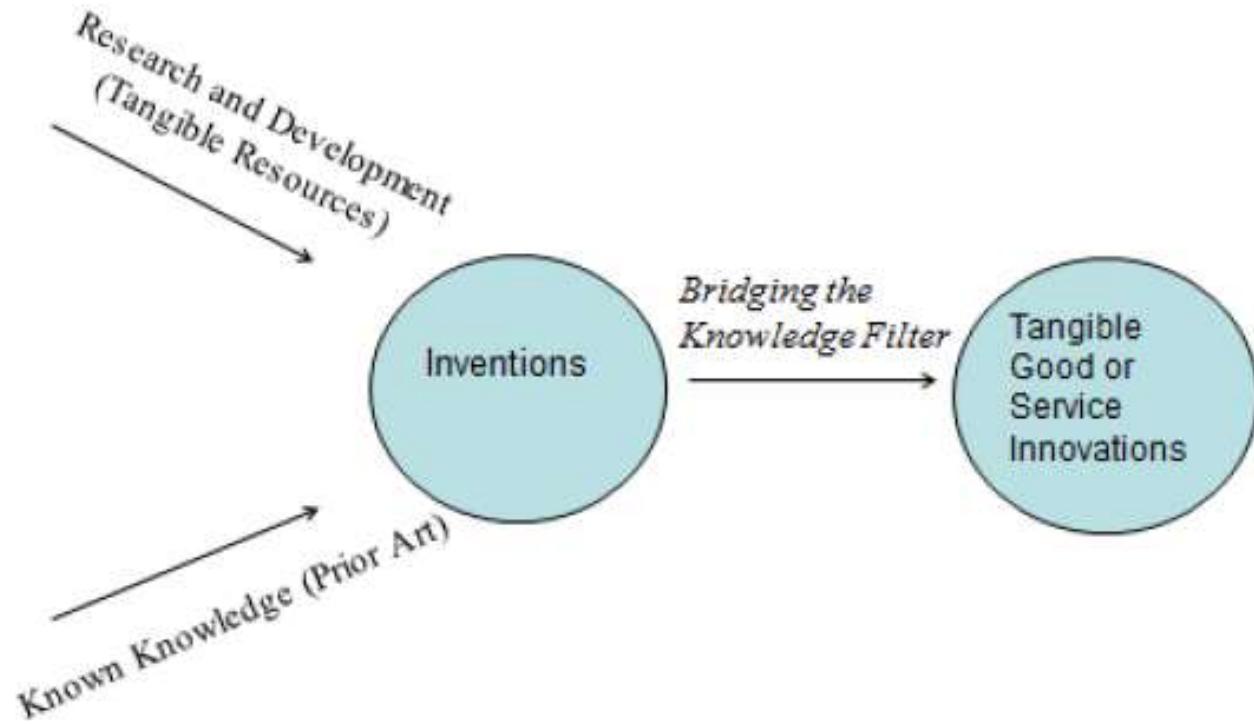
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**Table 1: Distribution of Large and Small-form Innovations According to Significance Levels (percentages in parentheses)**

Innovation significance	Description	Number of Innovations			
		Large Firms		Small Firms	
1	Establishes whole new categories	(0.00)	(0.00)	(0.00)	(0.00)
2	First of its type on the market in existing categories	50	(1.76)	30	(1.43)
3	A significant improvement in existing technology	360	(12.70)	216	(10.27)
4	Modest improvement designed to update existing products	2,434	(85.53)	1,959	(88.31)
Total		2,834	(99.99)	2,104	(100)

Source: Adapted from Acs and Audretsch (1990).

**Figure 1: The Knowledge Filter**

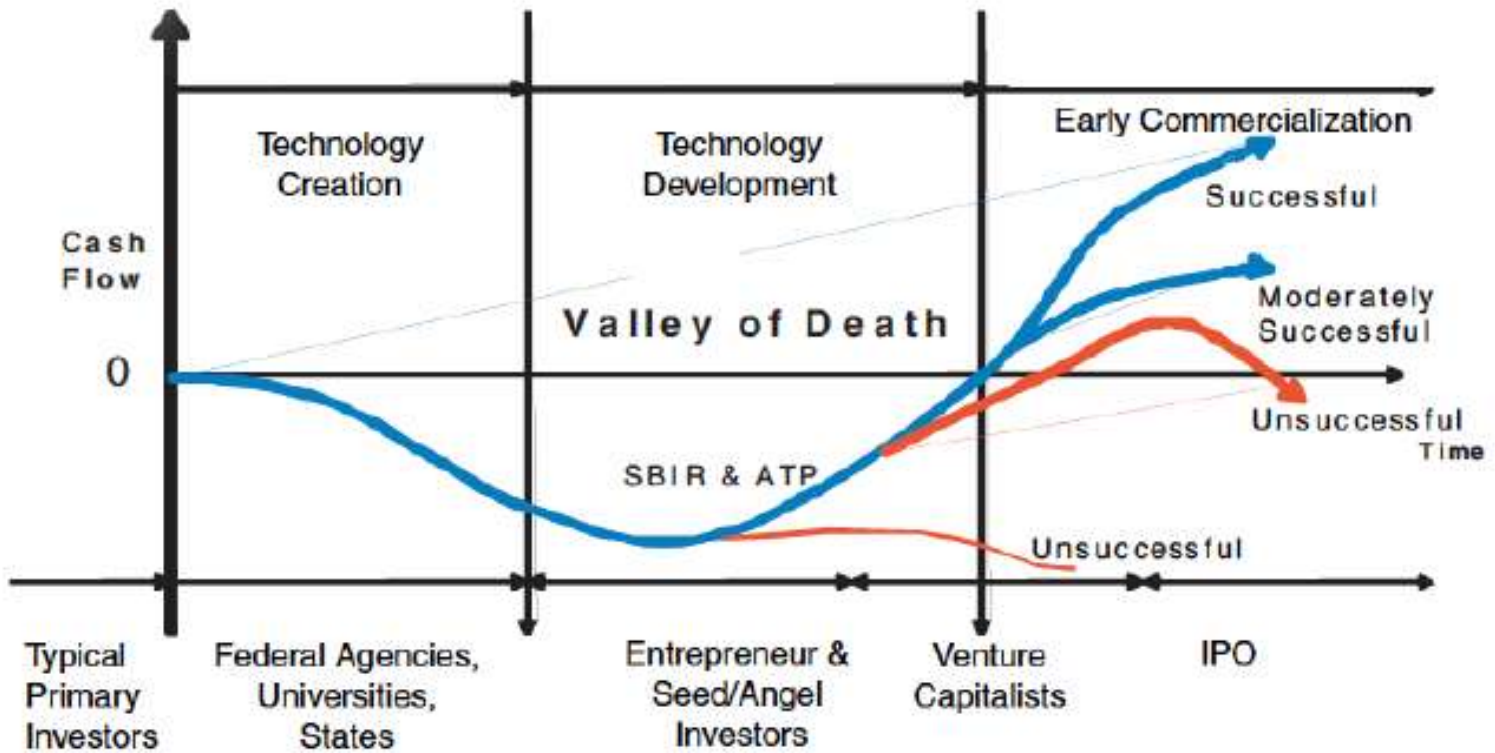


Acs Z. – Audersch in the 1980ies

The KNOWLEDGE FILTER may actually impend the spillover and commercialisation of knowledge.

The European Paradox (high RD investments –low growth)

**Figure 3: The Valley of Death**



Jet Propulsion Laboratory	1,717,203	1,717,203	NASA	Pasadena, CA
Lawrence Berkeley National Laboratory	503,775	443,273	DOE	Berkeley, CA
Lawrence Livermore National Laboratory	1,353,980	1,298,044	DOE	Livermore, CA
Massachusetts Institute of Technology Lincoln Laboratory	618,011	613,858	DOD, Department of the Air Force	Lexington, MA
National Astronomy and Ionosphere Center	13,591	13,375	NSF	Arecibo, PR
National Center for Atmospheric Research	144,293	132,375	NSF	Boulder, CO
National Optical Astronomy Observatory	53,608	46,624	NSF	Tucson, AZ
Plasma Physics Laboratory	75,720	75,488	DOE	Princeton, NJ
Software Engineering Institute	80,566	67,657	DOD, Office of the Secretary of Defense	Pittsburgh, PA
Stanford Linear Accelerator Center	231,960	231,960	DOE	Stanford, CA
Thomas Jefferson National Accelerator Facility	81,242	79,660	DOE	Newport News, VA
<b>Industry-administered FFRDCs</b>	<b>4,780,586</b>	<b>4,693,399</b>	Na	na
Idaho National Laboratory	248,322	235,506	DOE	Idaho Falls, ID
Los Alamos National Laboratory	2,046,260	2,029,056	DOE	Los Alamos, NM
NCI Frederick Cancer R&D Center	339,800	339,800	NIH	Frederick, MD
Sandia National Laboratory	2,031,309	1,974,142	DOE	Albuquerque, NM
Savannah River Technology Center	114,895	114,895	DOE	Aiken, SC
<b>Nonprofit-administered FFRDCs</b>	<b>3,184,988</b>	<b>3,048,510</b>	Na	na
Aerospace Corporation	36,490	16,930	DOD, Department of the Air Force	El Segundo, CA
Arroyo Center	25,195	25,195	DOD, Department of the Army	Santa Monica, CA
Brookhaven National Laboratory	510,212	491,138	DOE	Upton, NY
C3I FFRDC	46,368	46,368	DOD, Office of the Secretary of Defense	Bedford, MA/McLean, VA
Center for Advanced Aviation System Development	7,290	7,290	FAA	McLean, VA
Center for Naval Analyses	99,993	89,721	DOD, Department of the Navy	Alexandria, VA
Center for Nuclear Waste Regulatory Analyses	17,007	16,519	NRC	San Antonio, TX
Homeland Security Institute	25,370	25,370	Department of Homeland Security	Arlington, VA

# Packages in the innovation policy (US early 1980ies)

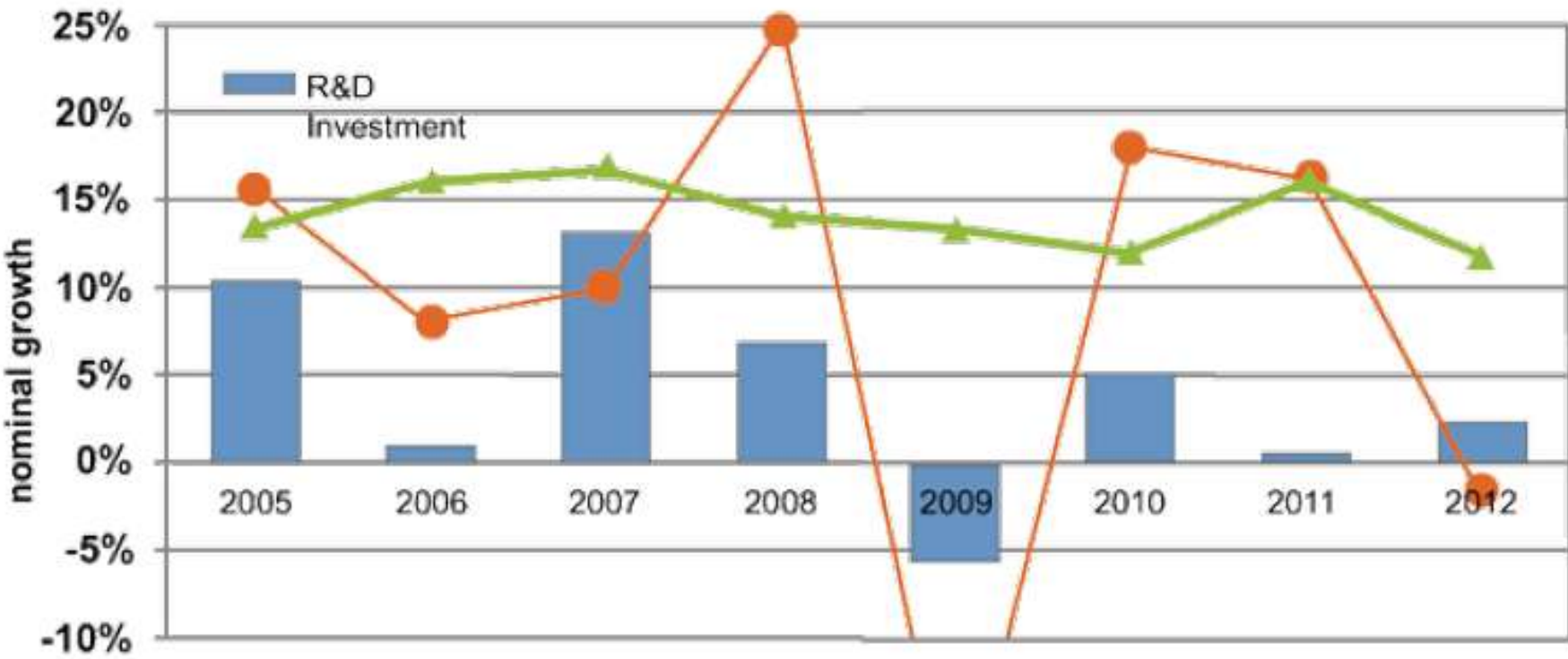
1979 immigration laws Hart-Cellar Act

Bayh- Dole Act patents

1981 tax credit for company RD

1982 SBIR Small Business Innovation Research

Figure 4.4 Annual R&D and net sales growth and profitability\* by the UK companies



Note: For 122 UK out of the EU1000 companies with data for the whole period.  
\* Profitability expressed as companies' profits as percentage of net sales  
Source: The 2013 EU Industrial R&D Investment Scoreboard  
European Commission, JRC/DG RTD.



**Table 3.1 Ranking of top 15 industrial sectors by overall one-year R&D growth for the EU, US and Japanese companies in the 2013 *Scoreboard***

Rank	Sector	Overall one-year R&D growth (%)	EU-527 R&D change (%)		US-658 R&D change (%)		Japan-353 R&D change (%)	
			1 year	3 years	1 year	3 years	1 year	3 years
1	Software & Computer Services	11.8	14.2	10.0	12.6	10.4	-4.7	-8.4
2	Industrial Engineering	9.8	12.3	10.0	9.4	13.3	3.4	4.2
3	Automobiles & Parts	8.9	14.4	12.6	-2.6	5.1	6.4	5.3
4	Technology Hardware & Equipment	8.8	-2.3	1.4	14.8	9.7	-4.1	-0.5
5	Health Care Equipment & Services	8.3	8.7	7.6	8.5	6.2	4.9	3.9
6	Aerospace & Defence	7.0	9.5	6.1	-1.3	1.3		

The main R&D funding indicators (GERD, BERD, GBAORD) and their evolution during the last three years in comparison with the corresponding EU 27 average are given in table below.

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b> (estimate, if such data are available)	<b>2020 national target</b>	<b>EU average 2011</b>
<b>GDP growth rate</b>	-3.5	1.0	1.6	2.0 <sup>(1)</sup>	n/a	1.5 - 0.3 (2012) <sup>(4)</sup>
<b>GERD as % of GDP</b>	0.919	0.792	0.777	n/a	1.5 <sup>(2)</sup>	2.03
<b>GERD (euro per capita)</b>	35.53	29.67	32.49	n/a	n/a	510.5 (2011) <sup>(5)</sup>
<b>GBAORD (€ million) <sup>(3)</sup></b>	166.96	131.78	153.60	n/a	n/a	91,277.1 (EU27 total 2011)
<b>GBAORD as % of GDP <sup>(3)</sup></b>	0.578	0.471	0.493	n/a	n/a	0.73
<b>BERD (€ million)</b>	38.02	25.80	22.72	n/a	n/a	159,975.937 (EU27) 5,925.03 (average)
<b>BERD as % of GDP</b>	0.132	0.092	0.073	n/a	n/a	1.26
<b>R&amp;D funded by Business Enterprise Sector (% of GDP)</b>	0.153	0.146	0.120	n/a	n/a	1.26 <sup>(4)</sup>