

# **“How do firms protect their Intellectual Property in Greece and other European countries: Evidence from recent surveys”**

**Yannis Caloghirou,**

**Lab. of Industrial & Energy Economics, and Innovation & Entrepreneurship Unit,  
National Technical University of Athens**

**Workshop on Intellectual Property: From History to Policy & Entrepreneurial  
Concerns**

**National Hellenic Research Foundation**

**Athens, February 11& 12, 2014**

# AEGIS Survey Design: Who is in?

- **Newly** established firms
  - Established from **2001** to **2007** with a primary activity in **pre-selected** sectors (High Tech Low Tech, KIBs).
- **Actually** new firms but **not** new legal entities resulting from any type of legal transformation of already existing firms
- **No subsidiaries** of existing companies, or mergers acquisitions, or joint ventures

# The survey arithmetic (numbers)

- Initial population 338,000 firms based on Amadeus Database
- 10 countries (Sweden, Denmark, UK, Germany, France, Italy, Greece, Portugal, Czech Republic, Croatia)
- 22,000 contacts
- 4,004 completed questionnaires
- The survey was conducted in 2011

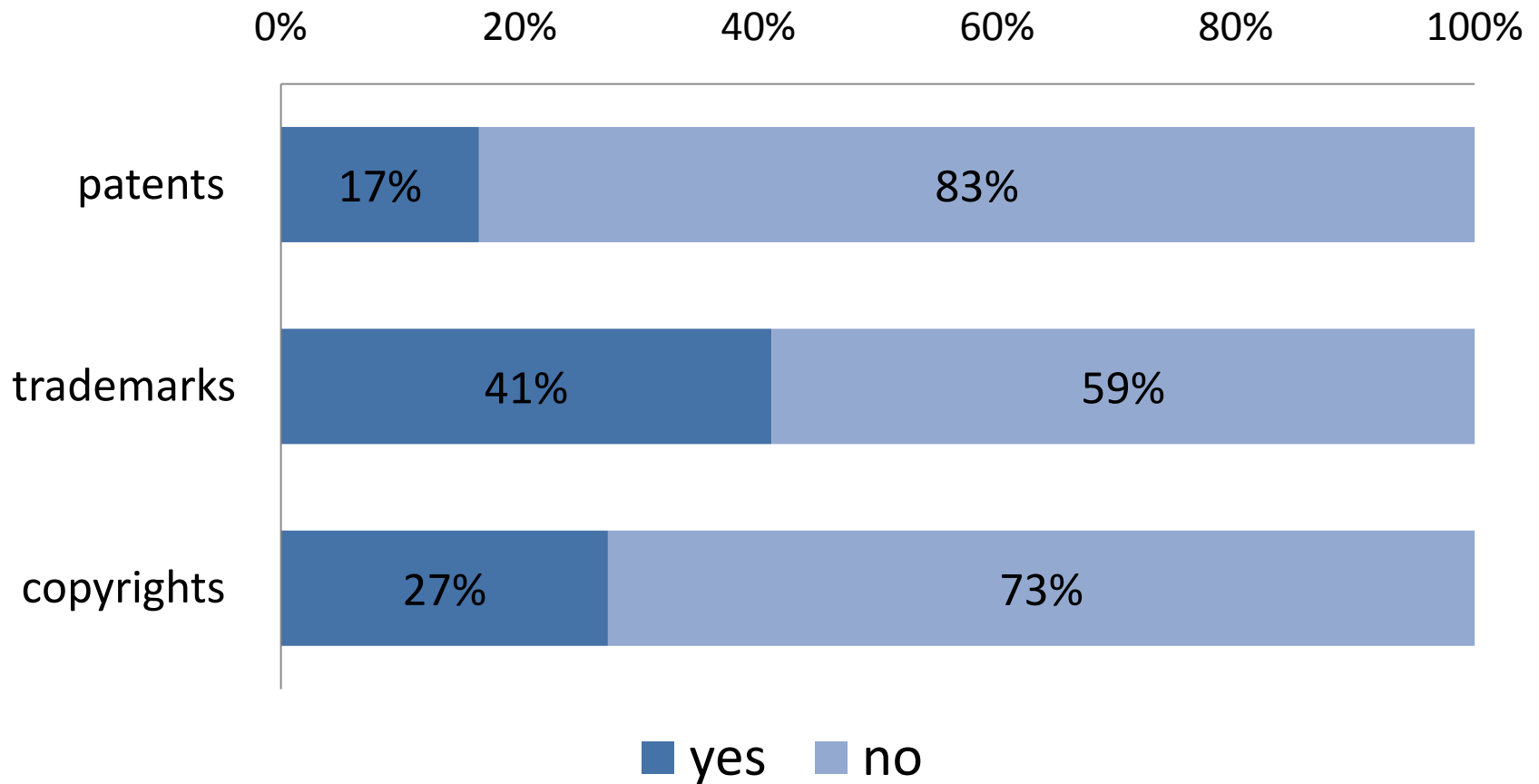
# The country dimension: The 10 countries surveyed belong to 5 different models (VoC)



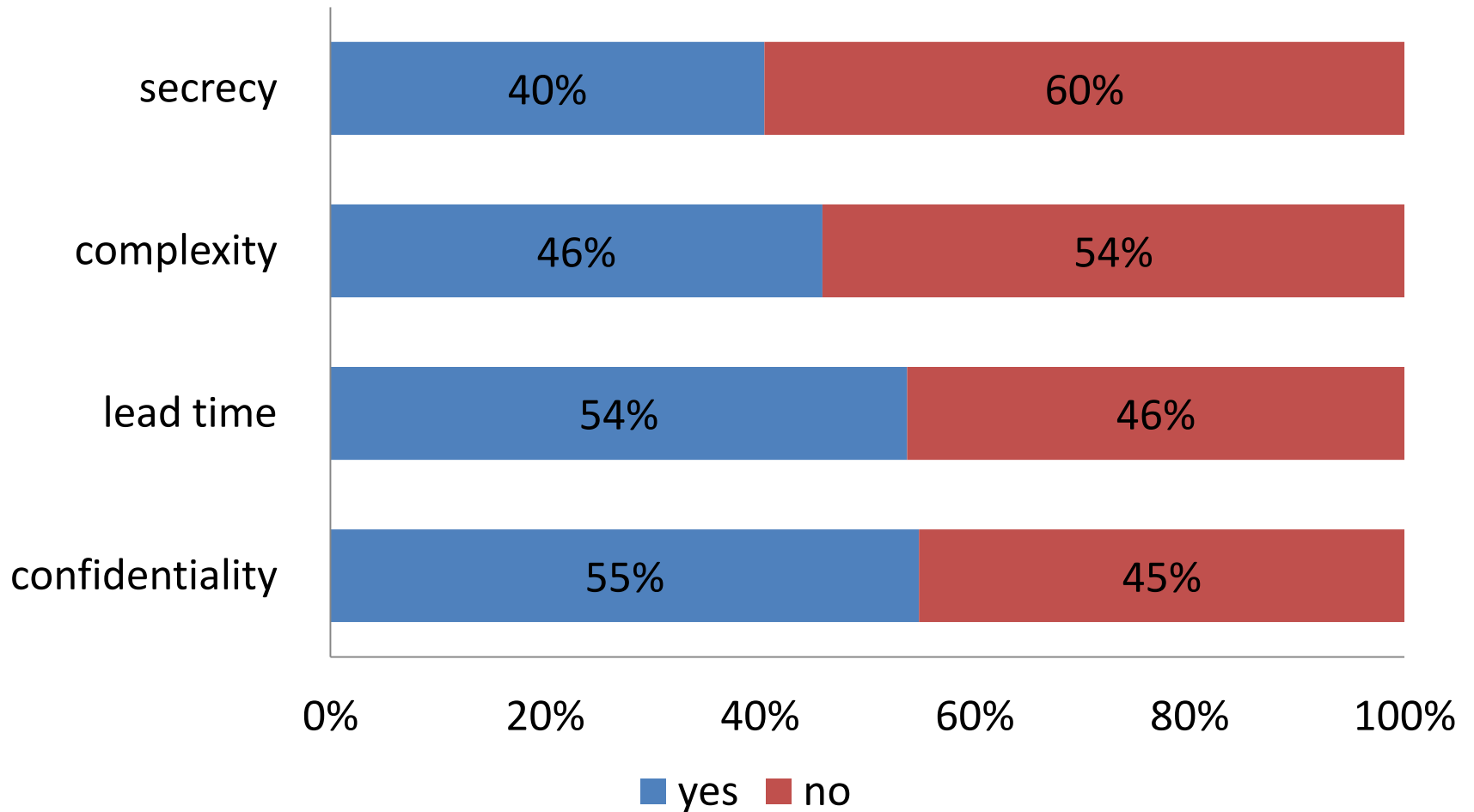
**Q30: Please indicate which of the following methods were used by your firm to protect its intellectual property during the last three years.**

- Patents
- Trademarks
- Copyrights
- Confidentiality agreements
- Secrecy
- Lead-time advantages on competitors
- Complexity of design

# Formal IP protection methods (N=2548)



# Informal IP protection methods (N=2548)



**“TOP 2000 FIRMS IN GREECE”  
SURVEYS  
(2011 AND 2013)  
IOBE & LIEE/NTUA**



# Formal IP protection per sector

	patents	trademarks	copyrights	N
High-tech	30%	43%	16%	304
Low-tech	17%	41%	16%	753
KIBS	14%	41%	36%	1486
Total	17%	41%	28%	2543

# Informal IP protection per sector

	confidentiality	secrecy	lead time	complexity	N
High-tech	60%	50%	63%	64%	304
Low-tech	34%	29%	54%	40%	753
KIBS	64%	44%	52%	45%	1486
Total	55%	40%	54%	46%	2543

# IP protection methods per country

Countries	Patents	Trademarks	Copyrights	Confidentiality agreements	Secrecy	Lead-time advantages	Complexity of design	N
<b>HR</b>	15%	43%	33%	41%	49%	68%	63%	138
<b>CZ</b>	13%	26%	20%	48%	28%	42%	21%	138
<b>DK</b>	15%	24%	28%	62%	56%	84%	44%	196
<b>FR</b>	16%	39%	17%	49%	24%	38%	46%	309
<b>DE</b>	21%	44%	37%	75%	71%	64%	57%	334
<b>EL</b>	15%	67%	33%	47%	35%	11%	39%	231
<b>IT</b>	14%	39%	14%	40%	20%	71%	46%	430
<b>PT</b>	19%	53%	20%	38%	43%	77%	48%	223
<b>SE</b>	14%	45%	35%	62%	52%	38%	40%	207
<b>UK</b>	19%	30%	41%	74%	40%	41%	44%	342

# Sufficient sample from all regions

Regions	2011	2013
Attica	35,3%	35,0%
Central Macedonia	13,3%	13,5%
Thessaly	7,7%	7,5%
Crete	7,1%	7,4%
Eastern Macedonia and Thrace	6,3%	6,1%
Western Greece	6,0%	6,3%
Central Greece	5,4%	5,3%
Peloponnese	4,8%	4,8%
South Aegean	4,5%	4,3%
Epirus	3,0%	3,3%
Western Macedonia	2,7%	2,7%
Ionian Islands	2,2%	2,2%
North Aegean	1,6%	1,5%
<b>Total</b>	<b>100,0%</b>	<b>100,0%</b>
From History to Policy & Entrepreneurial Concerns	Yannis Caloghirou, LIIEE & I&E UNIT, NTUA, Athens, 12/2/2014	<b>2025</b>
		<b>2048</b>

# Industries and Wholesale / Retail Trade: 75% of responses

Sectors	2011	2013
<b>Wholesale / Retail Trade</b>	36,5%	34,9%
<b>Manufacturing</b>	34,0%	34,7%
<b>Hotels and restaurants</b>	7,1%	7,2%
<b>Construction</b>	5,4%	5,5%
<b>Business Services (financial, real estate, telecoms, transport)</b>	4,8%	4,8%
<b>Primary sector</b>	3,6%	4,5%
<b>Consulting services</b>	3,5%	3,3%
<b>Other services (entertainment, recreation, education, health services)</b>	2,7%	2,5%
<b>IT Companies</b>	2,5%	2,5%
<b>Total</b>	<b>100,0%</b>	<b>100,0%</b>
<b>N=</b>	<b>2025</b>	<b>2048</b>

# Not so big after all

	2011	2013
<b>1-10 employees</b>	12,2%	15,7%
<b>11-49 employees</b>	41,9%	41,0%
<b>50-249 employees</b>	35,2%	33,3%
<b>Over 250 employees</b>	10,6%	10,0%
<b>Total</b>	<b>100,0%</b>	<b>100,0%</b>
	<b>2025</b>	<b>2048</b>

So in fact more than half of the largest firms at the national and regional level in Greece employ less than 50 persons

# Patent activity of Greek firms during 2011-2012

*Firms that have applied for a patent outside Greece during the last 2 years*

	Number of firms	Total number of firms (sample)	%
Attica	37	698	5,3%
Central Greece (Sterea)	4	108	3,7%
Central Macedonia	14	274	5,1%
Crete	6	150	4,0%
East Macedonia and Thrace	1	129	0,8%
Epirus	1	66	1,5%
Ionian Islands	0	45	0,0%
North Aegean	0	89	0,0%
Peloponnese	2	98	2,0%
South Aegean	0	30	0,0%
Thessaly	3	153	2,0%
West Greece	4	124	3,2%
West Macedonia	1	55	1,8%
<b>Total</b>	<b>73</b>	<b>2019</b>	<b>3,6%</b>

# Patent activity of Greek firms during 2013-2014

*Firms that have / are planning to apply for a patent outside Greece*

	Number of firms	Total number of firms (sample)	%
Attica	32	677	4,7%
Central Greece (Sterea)	4	107	3,7%
Central Macedonia	16	270	5,9%
Crete	6	145	4,1%
East Macedonia and Thrace	3	122	2,5%
Epirus	2	65	3,1%
Ionian Islands	0	44	0,0%
North Aegean	1	28	3,6%
Peloponnese	3	94	3,2%
South Aegean	1	87	1,1%
Thessaly	5	151	3,3%
West Greece	5	123	4,1%
West Macedonia	2	54	3,7%
<b>Total</b>	<b>80</b>	<b>1967</b>	<b>4,2%</b>



# Very Skewed though

Number of firms	Number of Patents	%
32	1	43,8%
24	2 to 3	32,9%
8	4 to 5	11,0%
5	8 to 12	6,8%
4	20+	5,5%
73	313	100%

Champion: 1 Pharma firm with 60 patents

# Mostly manufacturing firms

	2011-2012			2013-2014		
	Number of patenting firms	%	% of the sectoral group	Number of patenting firms	%	% of the sectoral group
Primary sector	2	2,7%	2,2%	3	3,8%	3,3%
Manufacturing	54	74,0%	7,7%	53	66,3%	7,7%
Construction	2	2,7%	1,8%	2	2,5%	1,9%
Hotels - Restaurants	0	0%	0%	10	12,5%	1,4%
Trade	7	9,6%	1,0%	1	1,3%	0,7%
IT services	5	6,8%	10,0%	6	7,5%	13,0%
Other services	3	4,1%	2,6%	5	3,8%	3,3%
<b>Total</b>	<b>73</b>	<b>100%</b>		<b>80</b>	<b>100%</b>	

Source: Survey on the 2000 largest firms in Greece (IOBE-LIEE survey on behalf of SEV, 2013)

# Poor performance in intellectual protection rights in Greece

- In the EE-27 there are, on average, 4 patent applications per billion of GDP
  - In Greece: less than 1 application
- Income from licensing and patents ~ 0.5% of GDP
  - Netherlands and Switzerland: more than 2.5% of GDP

