

The Influence of Companies' Patenting Motives on their Standardisation Strategies

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13th EURAS Workshop

University of Skövde, Sweden, 16–18 June 2008

Folie 1



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New Insights about the Importance of Motives to Patent (Blind et al. 2006)

- Sector differences lost in significance for explaining the new more strategic motives to patent because strategic aspects are independent from sector characteristics and because of the convergence of technologies (= critique of Cohen et al. (2000), who emphasise the difference between complex and discrete technologies)
- Company size is relevant for the new strategic motives to patent



The Survey

Sample

- 1500 Companies surveyed in 2002, 500 respondents
- all active German applicants
- basis: patent database (EPO, WIPO) search
- threshold 3 patents: bias towards patent usage (compared to CIS)



Distribution of the Sample

Sectors (NACE codes in brackets)	Size classes			Total
	1–249	250–1999	2000 and more	
Construction (10–14)	9	20	15	44
Consumer (15–19, 36)	9	5	6	20
Chemistry (incl. bio/pharma) (24)	54	36	28	118
Metal production (27)	18	17	11	46
Mechanical engineering (29)	35	55	26	116
Motor vehicles (34)	13	23	31	67
Electrical engineering (30–33)	36	49	26	111
Total	174	205	143	522



Importance of Protection Means: overall

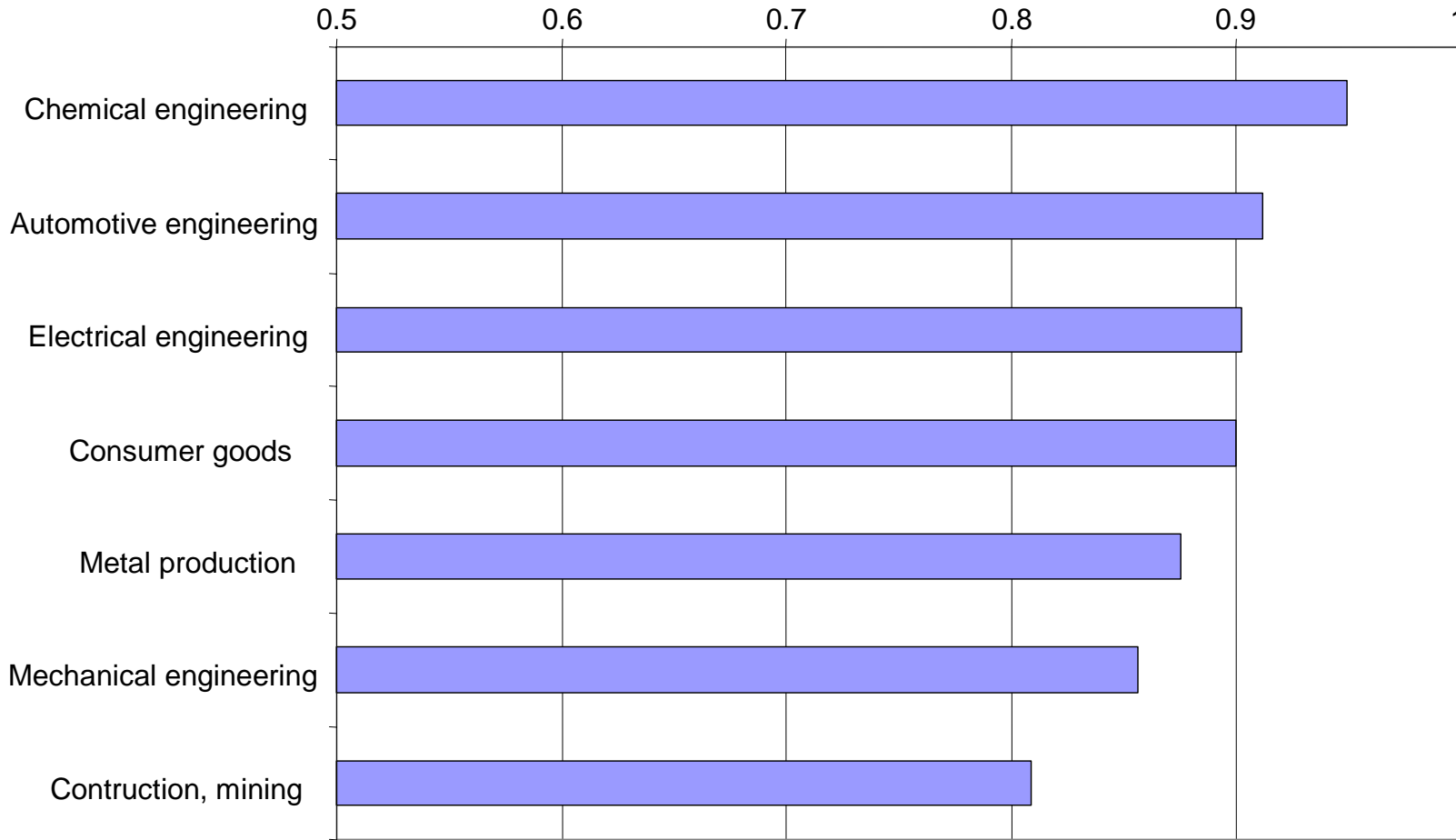
(share of companies giving high or very high importance)

	Importance
Lead time advantage	0.88
Patent strategies abroad	0.79
Domestic patent strategies	0.72
Exclusive relations to customers	0.66
Trademarks	0.58
Secrecy	0.58
Supplier contracts	0.51
Long-term contracts with workforce	0.44
Utility patent	0.24
Copyright	0.15
Design patent	0.11



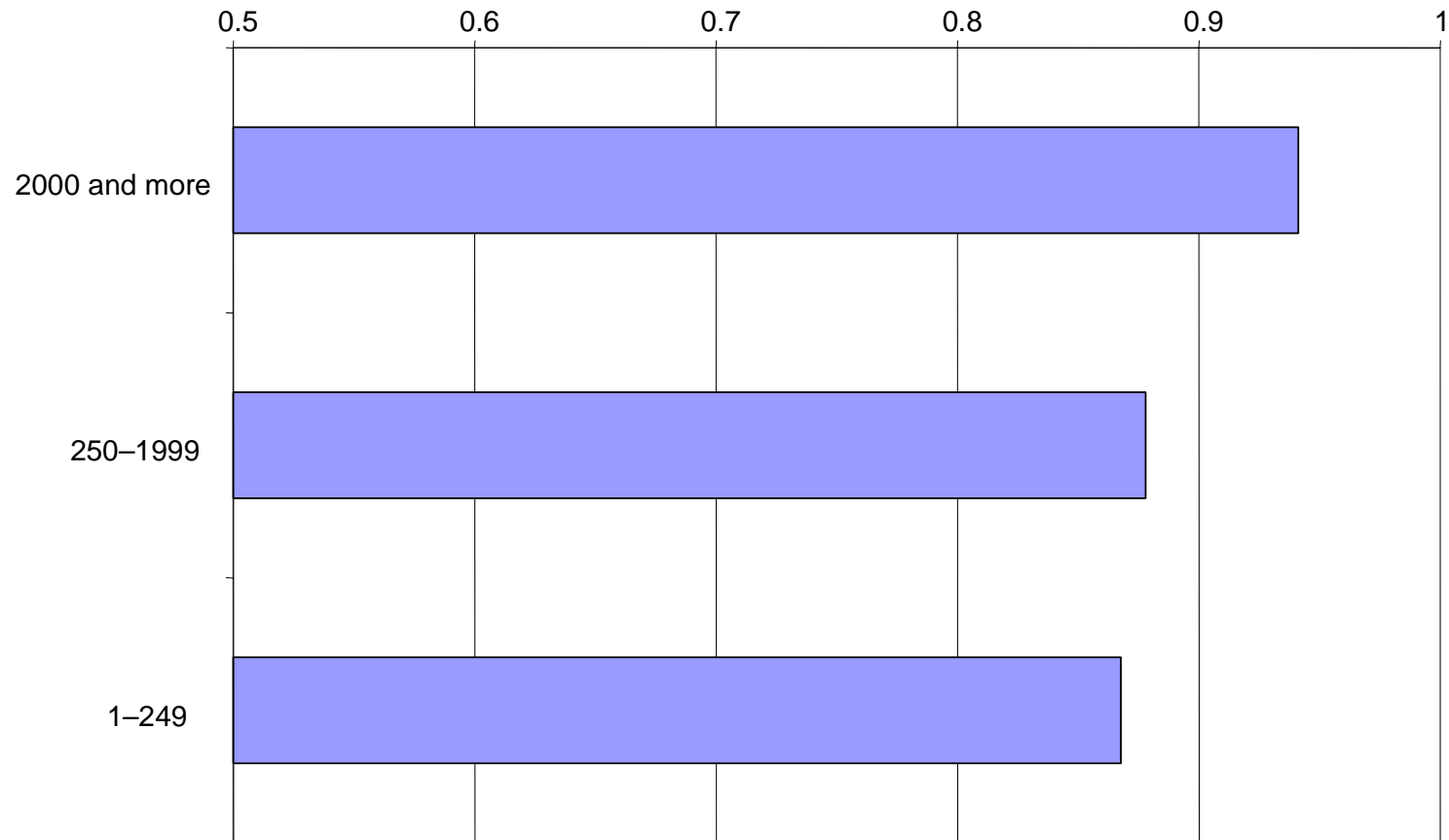
Importance of Patenting as Protection Means by Sector

(share of companies giving high or very high importance)



Importance of Patenting as Protection Means by Company Size

(share of companies giving high or very high importance)



Importance of Motives to Patent

(share of companies giving high or very high importance)

	Importance
Protection from imitation	0.84
Securing European markets	0.75
Defensive blockade of competitors	0.72
Securing national markets	0.71
Improvement of technological image	0.69
Offensive blockade of competitors	0.69
Securing markets outside Europe	0.57
Increase of company value	0.51
Improvement of position in cooperation	0.39
Incentives for employees	0.32
Assets for exchange (i.e. cross licensing)	0.28
Access to the capital market	0.26
Internal performance indicator	0.22
Generation of revenues from licences	0.21
Influence on standardisation	0.20



The ranking of the significance of motives to patent in previous empirical studies

	Arundel et al. 1995 (1993)	Duguet / Kabla 1998 (1993)	Cohen et al. 2002 (1994)	Pitkethley 2001 (1994)	Ifo 1999 (1997)	OECD 2003 (2003)**
Protection from imitation (traditional motive)	1	1	1	1	1	
Strategic motives						
Defensive blockade	3	2	3		2	3
Offensive blockade			2	2	3	
Reputation/techn. image			5		6	
International market extension	5	5				4
Internal performance indicator/motivation	6	6	7		5	
Exchange potential/negotiating mass	2	2	4	3	4	2
Licensing revenues	4	4	6	4	7	5
Make own invention the standard				5		
Capital market						6
Forced to patent because of patent practice of others						1

Source: own compilation

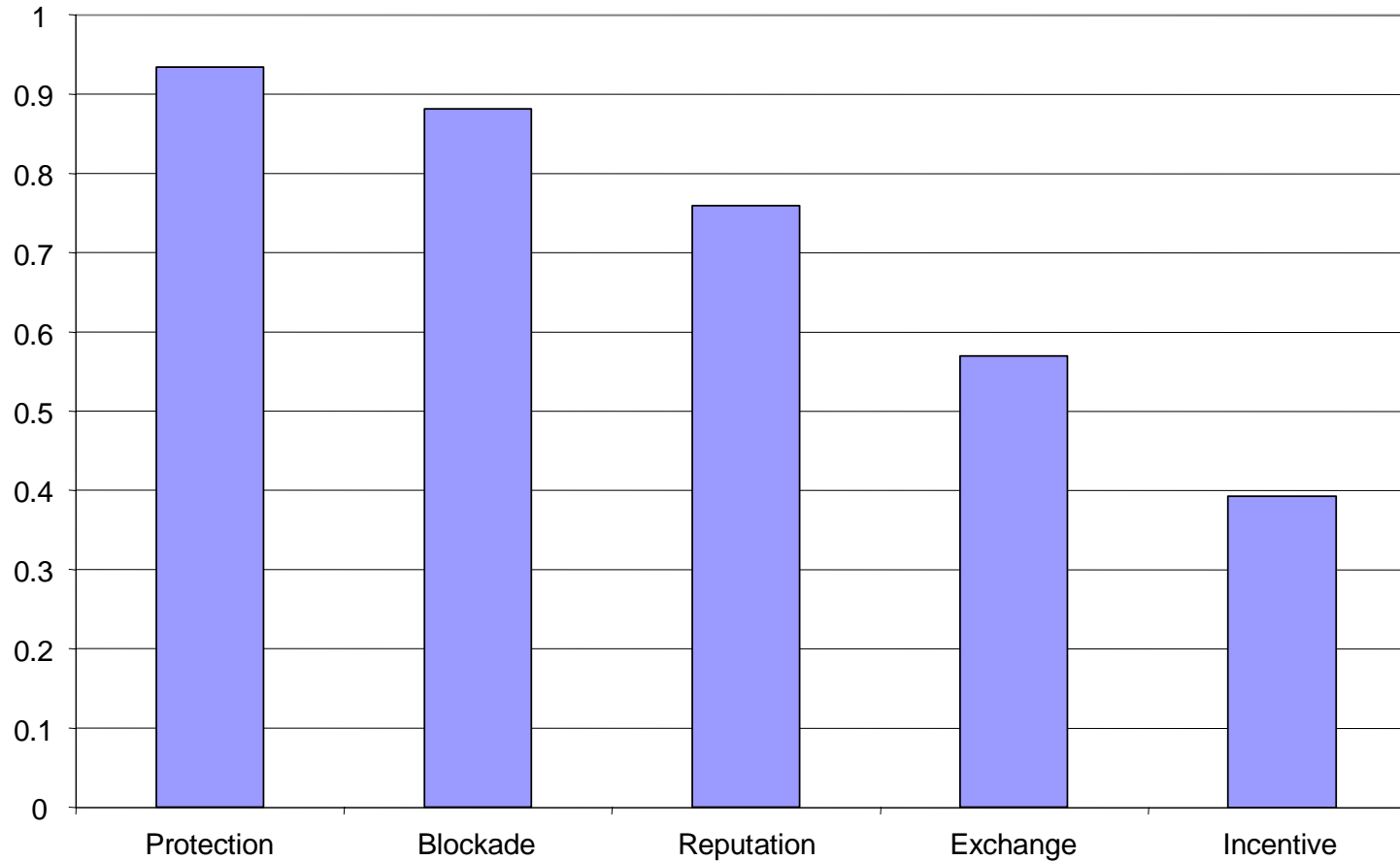
* in brackets the actual year during which data were collected (field phase)

** the OECD study asked about changes in the significance in the last ten years

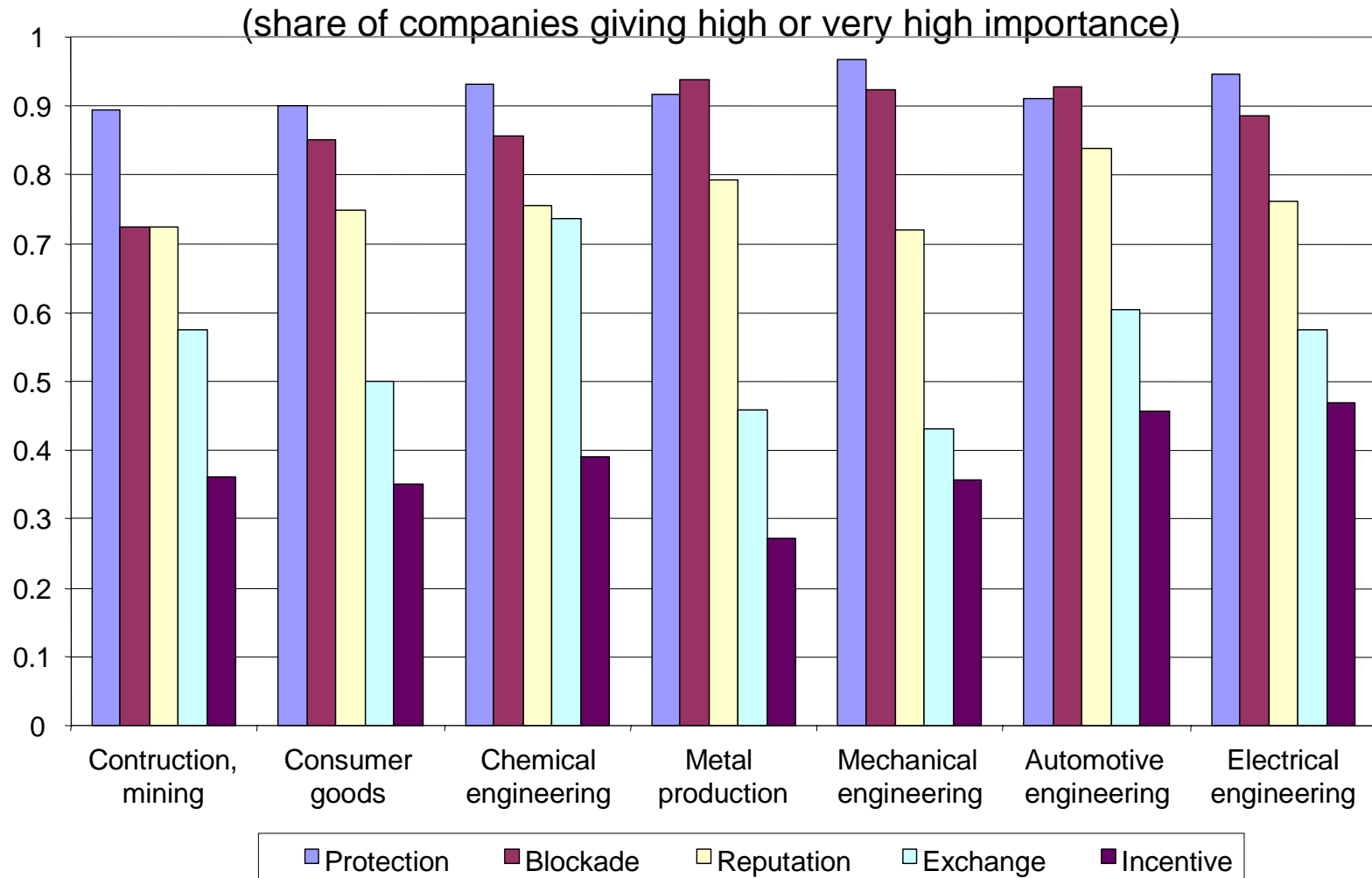


Importance of Clustered Patenting Motives

(share of companies giving high or very high importance)

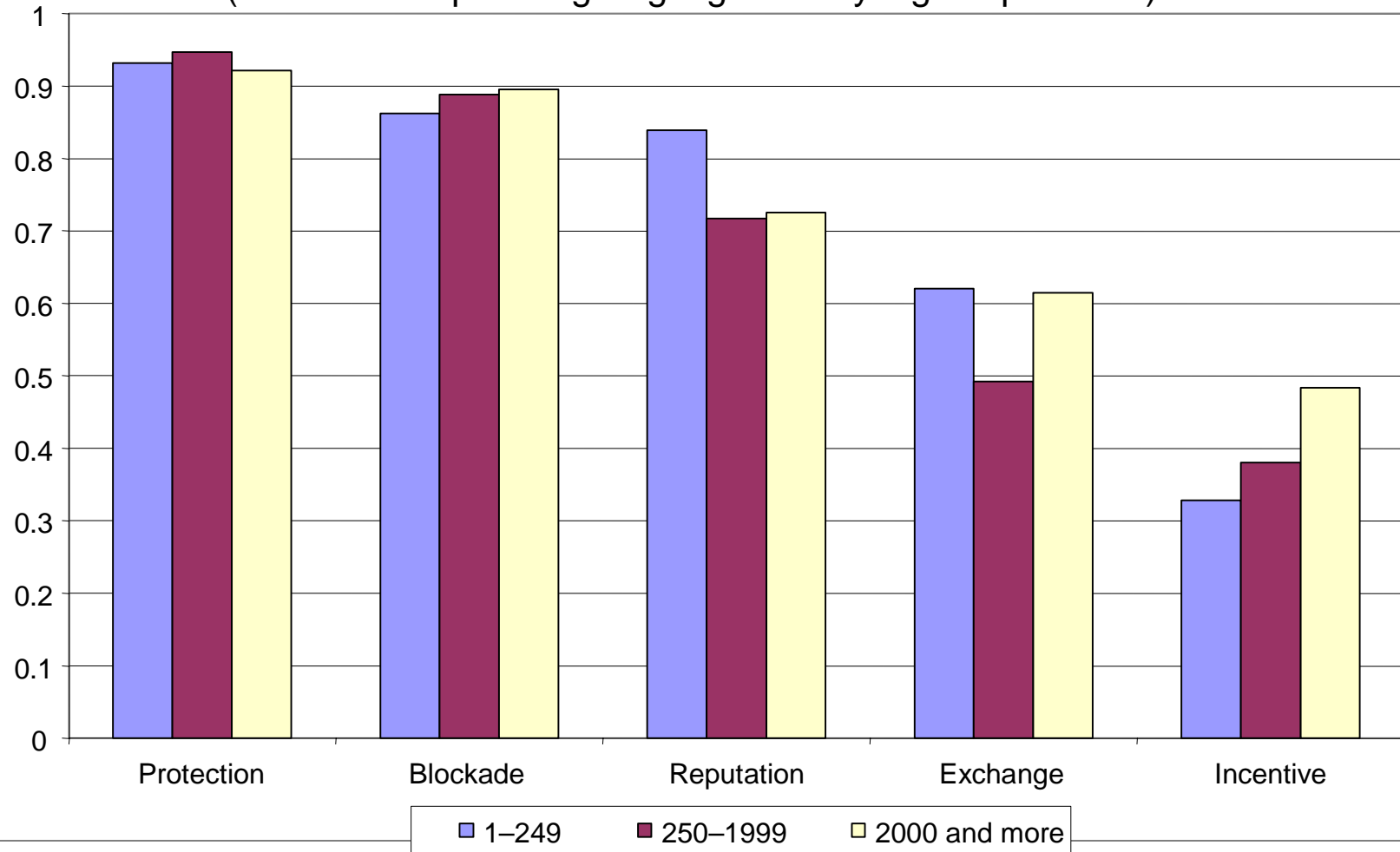


Importance of Clustered Patenting Motives by Sector



Importance of Clustered Patenting Motives by Company Size

(share of companies giving high or very high importance)



Significant Explanatory Variables in the Probit Regressions

Motive	Protection	Blockade	Reputation	Exchange	Incentive
Competition intensity	+++	+++			
Cooperation intensity				++	
R&D intensity				+++	+++
Co-patenting intensity	+	++	+	++	
Patent search intensity			++	+++	+++
Marketing dummy	+++		++		
Company size				++	+++



General Trends in Standardisation

Challenges

- Reduced technological and product life cycles
- Trend towards complex and multi-component technologies and technology convergence
- Globalisation of technology development, production and distribution
- Strong growth in IPR, especially patents

Reaction in the Standardisation Landscape

- Reaction by formal standardisation bodies via fastening processes and new types of products (e.g. PAS (= public available specifications) and CWA (CEN workshop agreement))
- Strong growth of informal standardisation consortia, especially in ICT

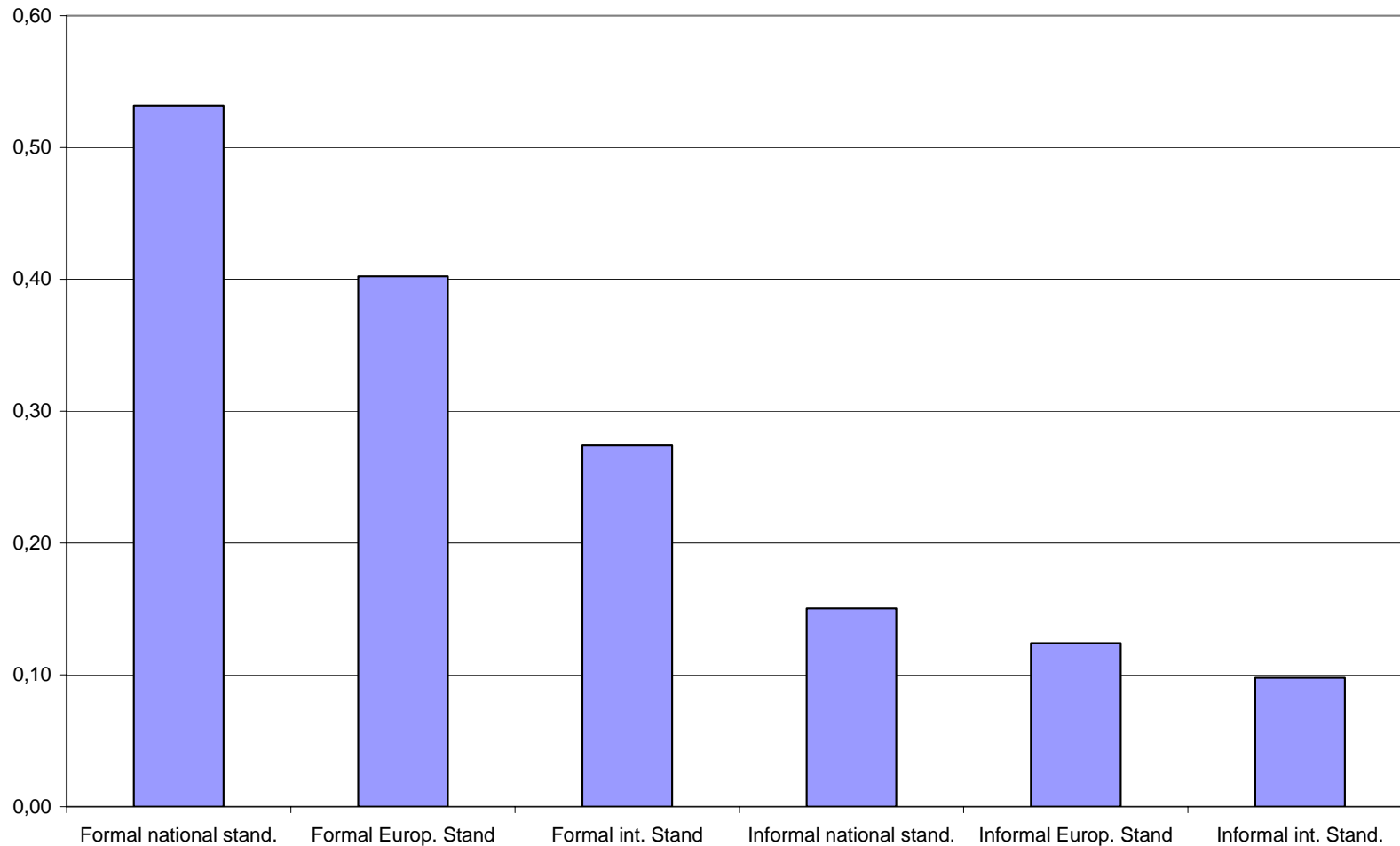


Two types of standardisation processes

- Formal standardisation processes:
 - open and consensus oriented with opposition option, which may lead to lengthy decision procedures
 - direct company participation only at the national level, representation by national standardisation bodies at the European and international level
 - IPR policy has to follow Fair Reasonable And Non-Discriminatory (FRAND) licensing rules
- Informal standardisation processes
 - mostly closed, which allows speedy decisions
 - direct company participation at the mostly internationally active consortia
 - very flexible IPR rules according to the preferences of the participants and the technological and market contexts, which allows optimal exploitation of their IPR



Involvement in Standardisation Processes



Insights from Theoretical Model by Lerner and Tirole (2006)

- Companies with superior technologies and strong IPR choose standardisation bodies which allow the most efficient exploitation of companies' intellectual property
- Preferences for standardisation processes with
 - flexible IPR rules
 - higher likelihood of success
 - higher speed
- Derivation of hypotheses on the influence of
 - protection strategies
 - patenting motiveson the selection of formal and informal standardisation processes



Hypotheses on Protection Strategies

H1a: Companies with rather high patent intensities are more likely to join informal standardisation processes.

H1b: Those companies with rather low patent intensities are more likely to join formal standardisation processes.

H2a: Companies emphasising the importance of patents as important protection strategies are more likely to join informal standardisation processes.

H2b: Companies emphasising the importance of patents as important protection strategies are less likely to join formal standardisation processes.

H3a: Companies emphasising the importance of informal protection strategies are less likely to join informal standardisation processes.

H3b: Companies emphasising the importance of informal protection strategies are more likely to join formal standardisation processes



Results of Probit Regression Analysis

	formal	informal
Patent intensity		++
Imp. patents		
Imp. other formal prot. instr.	+++	
Lead-time advantage		
Customer relations		
Supplier contracts		+
Size	+++	+++



Results of Ordered Probit Regression Analysis

Patent intensity	+++
Imp. patents	
Imp. oth. formal prot. instr.	---
Lead-time	
Customer	
Supplier	
Logsize	+++

Dependent variable:

- 1: formal stand
- 2: formal and informal stand
- 3: informal stand



Interpretation of Results

- no contradiction to Blind and Thumm (2004), who find negative influence of patent intensity on likelihood to join formal standardisation processes
- significant difference in patent intensity between companies joining formal or informal standardisation processes
- the significant influence of other formal protection rights on the likelihood to join has to be investigated further
- informal protection strategies have no influence



Hypotheses on Patenting Motives I

H4a: Companies emphasising the importance of the protection motive in their patenting strategy are more likely to join informal standardisation processes.

H4b: Companies not emphasising the importance of the protection motive in their patenting strategy are more likely to join formal standardisation processes.

H5a: Companies emphasising the importance of the technological image effect of their patents are more likely to join informal standardisation processes.

H5b: Companies not emphasising the importance of the technological image effect of their patents are more likely to join formal standardisation processes.



Hypotheses on Patenting Motives II

H6a: Companies emphasising the importance of the exchange motive in their patenting strategy are more likely to join informal standardisation processes.

H6b: Companies not emphasising the importance of the exchange motive in their patenting strategy are more likely to join formal standardisation processes.

H7a: Companies emphasising the importance of the blocking motives in their patenting strategy are more likely to join formal standardisation processes.

H7b: Companies not emphasising the importance of the blocking motives in their patenting strategy are more likely to join informal standardisation processes.

H8: Companies, which follow the strategy to patent in order to generate licensing revenues, are especially less likely to join formal, but also informal standardisation processes.



Results of Probit Regression Analysis

	formal	informal
Patent intensity		
Protection from imitation		++
Improvement of technological image		++
Assets for exchange (i.e. cross licensing)	++	++
Offensive blockade of competitors		--
Defensive blockade of competitors		-
Generation of revenues from licences	---	-
Securing national markets	+++	
Securing international markets	--	
Competition intensity		
Cooperation intensity		+++
Logsize	+++	+++



Results of Ordered Probit Regression Analysis

Patent intensity	+
Protection from imitation	++
Improvement of technological image	++
Assets for exchange (i.e. cross licensing)	
Offensive blockade of competitors	-
Defensive blockade of competitors	-
Generation of revenues from licences	
Securing national markets	
Securing international markets	
Competition intensity	
Cooperation intensity	+++
Size	+++

Dependent variable:

- 1: formal stand
- 2: formal and informal stand
- 3: informal stand



Interpretation of Results

- patenting motives have a significant influence on participation in formal and informal standardisation processes
- companies with “collaborative” patenting strategies are more likely to join informal standardisation processes
- companies using patents to block competitors are more likely to join formal standardisation processes
- companies trying to generate licensing revenues abstain from both types of standardisation processes and can be characterised to follow a de facto standardisation strategy



Policy Implications

- patenting activities have an influence on standardisation activities, which require in general a better coordination between IPR and standardisation policies
- differences regarding patenting motives between formal and informal standardisation processes have to be taken into account in
 - the possible reconsideration of the national, European and international formal standardisation bodies
 - the current discussion of the new relationship between formal and informal standardisation bodies (e. g. regarding the regulatory framework, public procurement etc.)



Thank you for your attention!

