

Appendix

Table A.1

		CIS questionnaire (2008-10 and 2010-2012 harmonised): obstacles to innovation			
Classes	Items	Degree of importance:			
		Not experienced	low	medium	high
		0			1
Financial obstacles	Lack of adequate finance				
Human resources obstacles	Lack of qualified personnel				
Market obstacles	Lack of demand				
	Dominant market share held by competitors				

Table A.2

CIS 2008-2010 and 2010-12 questionnaire: innovative activities			
Classes	Items	Firm not engaged	Firm engaged (highest engagement only)
		0	1
1. Technology acquisition	Acquisition of extramural R&D		
	Acquisition of machinery		
	Acquisition of other technologies		
2. Training & marketing	Training for innovative activities		
	Marketing for new product/processes		
3. Internal R&D	In-house R&D		
	Design		
	Other activities supporting innovation		

Table A.3 – List of variables

Variables	Type	Definitions
Any innovation output introduced	0/1	1 if firm <i>i</i> introduces a process or a product innovation into the market in years 2008-10 or 2010-12, 0 otherwise. A process innovation is the implementation of a new or significantly improved production process, distribution method, or support activity for goods or services, such as maintenance systems or operations for purchasing, accounting, or computing (exclude purely organizational innovation). A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems. Process or product innovations (new or improved) must be new to the enterprise, but not to the market.
Organization inn.	0/1	1 if firm <i>i</i> introduces an organizational innovation in year <i>t</i> , 0 otherwise. An organizational innovation is a new organizational method in the enterprise's business practices (including knowledge management), workplace organization and decision making, or external relations that has not been previously used by the enterprise. It must be the result of strategic decisions taken by management. It exclude mergers or acquisitions, even if for the first time.
Marketing inn.	0/1	1 if firm <i>i</i> introduces a marketing innovation in year <i>t</i> , 0 otherwise. A marketing innovation is the implementation of a new marketing concept or strategy that differs significantly from the enterprise's existing marketing methods and which has not been used before. It requires significant changes in product design or packaging, product placement, product promotion or pricing. It exclude seasonal, regular and other routine changes in marketing methods.
Innovation intensity	0/1	As explained in the paper, used to build firms' engagement in innovation, see Table A.3 above.
Part of a group	0/1	1 if firm <i>i</i> belongs to a group, 0 otherwise
Less than 10 years	0/1	1 if firm <i>i</i> is less than 10 years old, 0 otherwise
More than 20 employees	0/1	1 if firm <i>i</i> has more than 20 employees at the end of 2010 or 2012, 0 otherwise
Revenue 10-50 mil. euros	0/1	1 if firm <i>i</i> has an average revenue between 10 and 50 millions of euros per year, 0 otherwise
Revenue > 50 mil. euros	0/1	1 if firm <i>i</i> has an average revenue above 50 millions of euros per year, 0 otherwise
Graduate workers	0/1	At least 1 employee has a university degree in firm <i>i</i>
Abandoned inn. projects	0/1	1 if firm <i>i</i> abandoned innovation activities in the years 2008-10 or 2010-12, 0 otherwise.
Ongoing inn. projects	0/1	1 if firm <i>i</i> had innovation activities still ongoing at the end of 2010 or 2012, 0 otherwise.
Sector Dummies	0/1	Sector-specific component captured by sector dummies
Time Dummy	0/1	Time-specific component captured by time dummy
Return on assets (ROA)	Percentages	Earnings before interest and taxes / Total assets
Leverage	Percentages	Financial debts / Equity plus financial debts