
Research article

The involvement of the Spanish industrial sector in environmental sustainability and its impact on productivity

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Supplementary

Appendix A

Table A.1. Definition and descriptive statistics of variables.

Variables	Mean	Definition
Firm decides to undertake R&D (%)	53.73	Dummy, 1 if the company decides to innovate
Product innovation (%)	53.74	Dummy, 1 if the company performs product innovation
Process innovation (%)	52.78	Dummy, 1 if the company performs process innovation
Organizational innovation (%)	42.13	Dummy, 1 if the company performs organizational innovation
Continuous R&D engagement (%)	43.47	Dummy, 1 if the company conducts continuous innovation
<i>Firms' characteristics</i>		
Size	180.90	Number of employees (continuous variable)
Age (years)	35.76	Age of company (continuous variable)

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Variables	Mean	Definition
Capital stock (€)	167605.1	Deflated physical capital stock (continuous variable)
Equipment costs (€)	679.14	Deflated spending on equipment per employee (continuous variable)
Training expenditure (€)	21.71	Expenditure on staff training per employee (continuous variable)
Degree (%)	18.88	Share of workers with a degree (continuous variable)
Foreign capital (%)	14.25	Dummy, 1 for firms with foreign capital participation >50%
Productivity (€)	259217.9	Deflated sales per worker (continuous variable)
Environment	55.66	Dummy, 1 if the company considers reducing environmental impacts to be a relevant aim of innovation
<i>Factors hampering innovation¹ (categorical variables)</i>		
Lack of funding	2.82	Importance of the shortage of own funds
Lack of external financing	2.74	Importance of the shortage of external funds
Cost of innovation	2.81	Relevance of the high cost of innovation
<i>Sources of information¹ (categorical variables)</i>		
Internal	3.36	Relevance of internal company sources
Suppliers	2.63	Relevance of suppliers
Customers	2.66	Relevance of consumers
Competitors	2.24	Relevance of competitors
Universities	1.81	Relevance of universities
Trade fairs	2.20	Relevance of trade fairs
<i>Public support (%)</i>		
Local funding	17.07	Dummy, 1 if the company received local funding for innovation
National funding	20.03	Dummy, 1 if the company received national funding for innovation
EU funding	4.21	Dummy, 1 if the company received EU funding for innovation
<i>Others (%)</i>		
International competition	82.03	Dummy, 1 if the firm competes in international markets
Cooperation	29.12	Dummy, 1 if the company cooperates with other firms in the development of innovative activities
Group	43.88	Dummy, 1 if the company belongs to a business group
Formal Protection	23.18	Dummy, 1 if the firm uses patents, a design pattern, trademarks, or copyright to protect innovations.
<i>Location (%)</i>		
Madrid	9.67	Dummy, 1 if the company is based in Madrid
Catalonia	29.00	Dummy, 1 if the company is based in Catalonia
Andalusia	5.46	Dummy, 1 if the company is based in Andalusia
Other	55.87	Dummy, 1 if the company is based in other Spanish regions

Note: These groups of variables take the following values: 1 = non-relevant, 2 = low, 3 = medium, and 4 = high.
Source: PITEC.



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