CONFERENCE ON CORPORATE R&D

The dynamics of Europe's industrial structure and the growth of innovative firms

Forget R&D – pay my coach:

Young innovative companies and their relations with universities

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Motivation / Objectives

Young innovative companies (YICs) have merited increasing attention for their role of industrial regenerators.

However, little is known on their relations with universities as a source of information.

- The main objective of the research is to analyze the likely variables that influence on YICs interaction with university.
- Within them, we combine different type of variables related both on the YIC and on its founder, to emphasize their interaction.

Methodology

Econometric estimation of the probability of having contracted with universities using the following variables:

Type of variable	Name	Description
Dependent variable	University contracts	Having contracted with universities (Yes/No)
Firm characteristics	Openness	Having contracted with consultants, technological institutes and other organisations
	R&D intensity	High/medium/low R&D intensity
	Firm size	Microfirms/small firm/medium plus large firm
Personal characteristics of the firm creators	Age	Less than 30 years, 30-39 years, 40-49 years and more than 49 years
	Sex	Male/female
	Education	No university degree, graduate university degree, post-graduate university degree
Motivations of the firm creators – reasons to have created their companies	Self-employment push	"I chose to create my own workplace"
	Monetary push	"Expectations to gain money through an own business"
	Academic pull	"To benefit from my specialised knowledge acquired from my activity as a university professor or researcher" plus "application of doctoral thesis or university R&D project"
		"To benefit from my specialised knowledge acquired from my R&D activity in my former company"/"work at technology centres"/"consultancy work"/"integration of several sources" plus "Opportunity arisen in the professional environment"
	Business pull	

Data base

The Valencian Community in Spain – a curious regional context: high degree of university-industry relation & low levels of technological innovation.

A survey carried out in 2009 by the regional agency for industrial development (IMPIVA).

Majority of YICS in the Valencian Community ~ 200.

Benchmark: more than 300 older innovative firms.

Combining firm characteristics, personal characteristics and motivations for firm creation.

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Approach

Search for evidence related to other types of firms such as start-ups or technology-based companies.

- Identification a set of firm characteristics that might be useful also for YICs.

Little evidence relating firms relations with universities and some personal characteristics and motivations of the firm founder.

- Hence, we combined firm and personal characteristics of the YIC founder.

Providing some theoretical foundations on YIC interaction with universities in the form of testable hypotheses.

Results

Probit model of having contracted with universities

	Non-YICs	YICs	YICs	YICs
Number of observations	320	178	178	185
Log likelihood function	-182	-104	-90	-98
Prob[x ² > value]	0	0	0	0
Pseudo R ²	0.68	0.70	0.74	0.72
	Coeff. (t-ratio)	Coeff. (t-ratio)	Coeff. (t-ratio)	Coeff. (t-ratio)
Constant	-1.13 (-5.24) **	-0.68 (-1.82)	-0.87 (-1.69)	-1.07 (-3.59) **
Openness	0.61 (6.41) **	0.38 (3.15) **	0.48 (3.51) **	0.49 (3.92) **
R&D intensity	0.23 (2.51) *	0.27 (2.17) *	0.1 (0.75)	
Firm size	0.32 (3.05) **	0.18 (0.69)	0.28 (1.01)	
Age			-0.14 (-0.97)	
Sex			0 (0.01)	
Education			0.38 (1.97) *	0.42 (2.37) *
Self-employment push			-0.79 (-2.38) *	-0.75 (-2.54) *
Monetary push			0.11 (0.37)	
Academic pull			0.62 (2.54) *	0.67 (2.9) **
Business pull			-0.28 (-2.17) *	-0.27 (-2.42) *
Industry sector dummies	Included (6)	Included (6)	Included (6)	Selected (3)

** p<0.01; * p<0.05

Policy implications

More emphasis on indirect actions (i.e. advice and consulting) to promote YIC interaction with university. Less on direct actions (R&D subsidies, fiscal incentives).

Next steps / The way forward

Additional evidence required for YICs in other contexts. Combination of personal and firm variables – promising!