THE EFFECT OF ENTREPRENEURIAL ORIGIN ON FIRMS' PERFORMANCE: THE CASE OF PORTUGUESE ACADEMIC SPINOFFS

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MOTIVATION

- Conflicting views regarding academic spinoff´s role on economic development:
  - Job creation and knowledge spillovers;
  - Technology lifestyle business with limited high-growth potential.
- Firms´ entrepreneurial origin can be an important driver of firms´ growth.
- Yet, no clear cut theory regarding the role of academic origin.

AIMS

- To map and to disclose particular features of Portuguese academic spinoffs.
- To examine potential performance differentials among firms originating from different entrepreneurial origin.

CONTRIBUTIONS

- Additional empirical evidence based on:
  - Larger dataset and more robust econometric methodology than previous studies.
- To inform the policy debate on the role of academic spinoffs as technology transfer mechanism.
- To contribute to firm growth theory.

DATA

- **Academic spinoffs**: **549.**
  - Self-collected population dataset since 1979 until 2010.
- **Non-Spinoffs: 98,100.**
  - Collected from SABI database. Restricted the sample to the same founding years and industries in which we observe academic spinoffs.

FIRM PERFORMANCE

- **Four** different indicators to disclose qualitative differences in firms´ growth process:
  - **Employees**
  - **Sales**
  - **Productivity**
  - **Exports**

FINDINGS

Table 2: Distribution of sample firms.

	Academic Spinoff		Non-Spinoff	
	N	%	N	%
Foundation date				
1979-1985	3	0.55	3,920	4.00
1985-1989	17	3.10	6,254	6.38
1990-1994	44	8.01	9,881	10.07
1995-1999	66	12.02	14,477	14.76
2000-2004	152	27.69	23,417	23.87
2005-2010	267	48.63	40,151	40.93
Total	549	100.00	98,100	100.00
Industry				
Biotechnology, pharmaceuticals	4	0.73	81	0.08
Computers and electronic equipment	18	3.28	3,630	0.37
Telecommunication services	30	5.46	1,839	1.87
Software	154	28.05	3,036	3.09
Research and Scientific activities	191	34.79	12,801	13.05
Health, education and business supporting services	78	14.21	30,592	31.18
Non-tech manufacturing and services [a]	74	13.48	49,388	50.34
Total	549	100.00	98,100	100.00
Geographic area				
Lisbon	148	26.96	35,656	36.35
Porto	112	20.40	17,807	18.15
Braga, Aveiro and Coimbra	208	37.89	13,795	14.06
Others [b]	81	14.75	30,842	31.44
Total	549	100.00	98,100	100.00

FINDINGS

Table 4: Descriptive statistics

			Academic spinoff firms		
Variable	Obs.	Mean	Std. Dev.	Min	Max
Employees	2,888	1.681	1.278	0	6.845
Sales	2,933	5.066	2.054	-3.287	11.169
Productivity	2,573	2.985	0.994	-2.303	6.842
Exports	1,282	4.066	2.665	-4.770	10.138
R&D	751	-3.920	4.238	-19.098	-0.0142
Firm Age	4,879	1.927	0.794	0	3.584
			Non-spinoff firms		
Variable	Obs.	Mean	Std. Dev.	Min	Max
Employees	496,195	1.133	1.056	0	9.128
Sales	524,945	4.813	1.724	-11.527	14.699
Productivity	433,987	2.703	1.078	-12.604	11.755
Exports	99,745	3.455	2.645	-11.512	14.639
R&D	20,805	-4.865	3.077	-20.095	-0.001
Firm Age	872,078	2.108	0.838	0	3.584

Note: Pairwise tests of differences in means are all statistically significant at $p<0.05$.

FINDINGS

- Academic spinoffs grow through resources accumulation and internationalization.
  - Yet, they do not translate these advantages into productivity gains.
- Younger academic spinoffs outperform their counterparts in terms of sales.
  - Yet, they do not retain these scales effects as they grow older.
- Portuguese academic spinoffs are contributing to economic development through job creation.
  - Yet their relevance as source of sustained economic value is limited so far.