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Spin-off company trajectories: survival, merger or acquisition, and dissolution

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Introduction

This project investigates spin-off companies formed by researchers using technology from a public research institution. Spin-offs companies can play an important role in the dissemination of inventions resulting from publicly funded research. They also contribute to economic growth and the competitiveness of industries. Much previous research focuses on the formation of spin-offs and their early growth stages. However, there are fewer studies investigating the trajectory of spin-off growth and, ultimately exits.

This study aims to address this gap using a sample of Canadian spin-off companies created between 1993 and 2005. The goal is to find out whether the spin-offs survive and grow independently, merge with other companies, or simply go out of business. This research is part of a bigger research project with the goal to find out the factors that results in survival or deaths of spin-off companies.

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Results

Categories	Number of Companies
Company survives independently (no exit)	50
Exit and no Merger or Acquisition (typically dissolved or inactive)	16
Exit with Merger or Acquisition	9

Differences between Independent vs. Not Independent Spin-off Companies					
Variables	Means		t	Significance	3
	Independent	Not Independent			
Venture Capitalist holds equity in the company	0.24	0.48	2.20	0.03	*
Business Angels hold equity	0.29	0.44	1.26	0.21	
Friends and family hold equity	0.35	0.2	-1.36	0.18	
Founders hold equity	0.92	0.92	-0.03	0.90	
Company received IRAP support	0.55	0.56	0.00	0.93	
Company received SR&ED tax credits	0.73	0.72	-0.05	0.96	
Long term positioning ¹	119.98	103.72	-1.91	0.06	t
Short term positioning ²	64.29	36.56	-2.72	0.01	**
Age of company (at time of interview)	7.63	8.44	0.90	0.37	
Number of employees at start-up	0.53	0.64	0.40	0.69	
Company based on information and communications technologies (ICT)	0.23	0.24	0.05	0.96	
Company based on biotechnologies	0.53	0.56	0.25	0.81	
Technology based company other than ICT and Biotechnologies	0.23	0.2	-0.34	0.733	

Differences between Company Exits					
Variables	Mean		t	Significance	3
	M/A	not M/A			
Venture Capitalist holds equity in the company	0.78	0.31	-2.40	0.03	*
Business Angels hold equity	0.33	0.5	0.78	0.44	
Friends and family hold equity	0.22	0.19	-0.2	0.84	
Founders hold equity	1	0.88	-1.08	0.29	
Company received IRAP support	0.78	0.44	-1.67	0.108 ⁴	
Company received SR&ED tax credits	0.78	0.69	-0.47	0.65	
Long term positioning ¹	115.22	97.25	-1.10	0.28	
Short term positioning ²	26.56	42.19	1.08	0.29	
Age of company (at time of interview)	10.22	7.44	-1.38	0.18	
Number of employees at start-up	0.33	0.81	0.78	0.45	
Company based on ICT	0.22	0.25	0.15	0.88	
Company based on biotechnologies	0.67	0.5	-0.78	0.44	
Technology based company other than ICT and Biotechnologies	0.11	0.25	0.81	0.43	

Notes:

¹ Long term positioning assesses the company's focus on and achievement of: Development of new markets, Securing stability and long-term survival of the company, Developing a position of technological leadership, Securing competitiveness

² Short term positioning assesses the company's focus on and achievement of: Sales growth, Increase of return on sales, Increase in market shares, Short-term realization of profits

³ Stars: Significance criteria:

*** if p<0.001, ** if p<0.01, * if p<0.05, t if p<0.1

⁴ Based on these analyses, IRAP funding shows no significant difference. However, given the small sample size, the fact that the mean difference is very close to significant suggests that additional analyses should be conducted to investigate the influence of IRAP funding.

Conclusions

1. Most spin-off companies (2/3 in our sample) did not exit and continue to operate independently
2. Spin-off companies that had obtained Venture Capital in the past are less likely to remain active as an independent company, but more likely to exit through merger or acquisition
3. Spin-off companies indicating strength in terms of long-term or short-term positioning in the earlier interviews are more likely to remain active as independent companies
4. Neither long-term positioning nor short-term positioning are significantly different for companies exiting with / without merger or acquisition
5. Companies supported by IRAP show practically no difference in terms of the survival rate, but the difference between the types of exits is almost significant. While this finding cannot be interpreted based on these descriptive analyses, additional analyses should investigate IRAP support further

Methods & Materials

Technique of data collection

Survival data: Collected using the internet, publicly available databases

Additional information on companies: Obtained approximately 5-6 years ago, based on interviews with founders or CEOs

Technique of data analysis

Analyzed the results using descriptive statistics (means and t-tests)

Unit of analysis: companies

Sample size: n=75

Definitions

Independent Company:

Company is still active as an independent entity

Not Independent Company:

Either merger/acquisition or other exits

Merger or Acquisition: Company merged with another company, was bought by another company or bought another company and merged operations

Other Exits: Company does not appear to operate any more or was confirmed closed / bankrupt

Other Exits: Company does not appear to operate any more or was confirmed closed / bankrupt

