

**THE ROLE OF FOUNDERS IN YOUNG
ENTREPRENEURIAL VENTURES'
INNOVATIVE PERFORMANCE:
EMPIRICAL EVIDENCE FROM
EUROPE**

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AIM OF THIS WORK

- Attempts to explore the effect of founder-specific characteristics on the innovative performance of young firms.
- Part of a large-scale research project, AEGIS (Advancing knowledge-intensive entrepreneurship and innovation for growth and social well-being in Europe), funded by FP7, 2009-2012.
- Part of a paper focusing on the impact of diverse firm resources (internal and external) on the innovation performance of young firms.
- Very recently published in Research Policy (Protogerou, Caloghirou and Vonortas, 2017).

THE STUDY'S CONTRIBUTION (I)

- Enormous growth in literature on the economics of technological change and innovation during the last 20 years, however, the progress in advancing our empirical understanding of the determinants of innovative activity of firms has been uneven.
- A need for more and better data on the independent variables considered to affect the innovative performance of firms, i.e. industry-level variables, firm attributes, and most importantly, individual-level variables
- Several previous studies have analyzed the relation between founders' human capital and young firms' survival and growth, however, a limited number of studies focuses on the impact of founder's characteristics on the innovation of young firms

THE STUDY'S CONTRIBUTION (II)

This work departs from the existing literature in three respects:

- It focuses on one type of resource that is particularly relevant for the innovative performance of young firms, which is the human capital encapsulated in its founders
- It uses an extensive and more-refined set of variables that capture heterogeneous but also complementary aspects of the founders' knowledge and skills.
- It is based on a large dataset, comprising firms from 10 European countries active in high, low-tech sectors and KIBS

THEORETICAL BACKGROUND

Entrepreneurs often play a dominant role in their business, especially when they are starting small.

- Founders with a broader general knowledge base are presumed to have a better ability to effectively search for and identify new opportunities.
- At the same time, entrepreneurs with a high degree of human capital are capable to fruitfully exploit new opportunities.
- The human capital of founders increases their productivity resulting in higher firm profits that can finance strategies for further growth.
- Founders' knowledge and skills are important resources for young firms and may also impact innovative activity.

HYPOTHESES: FOUNDER CHARACTERISTICS AFFECTING INNOVATIVE PERFORMANCE (I)

- Entrepreneurs who have greater generic human capital i.e. greater educational attainment and professional experience, will have a greater ability to identify and seize innovative opportunities.
- Therefore,
 - Hypothesis 1a: Founders' educational attainment is positively related to innovation performance.
 - Hypothesis 1b: Founders' professional experience is positively related to innovation performance.

HYPOTHESES: FOUNDER CHARACTERISTICS AFFECTING INNOVATIVE PERFORMANCE (II)

- Specific knowledge types are conducive and necessary to recognize opportunities, thus founders who have more and better quality work and research experience will be aware of a greater variety of opportunities and will be able to bear more innovative outcomes.
- Therefore,
 - Hypothesis 2a: Founding teams exhibiting prior industry experience would tend to initiate more innovative activities than firms with founders with little or no prior industry experience.
 - Hypothesis 2b: Founding teams with R&D experience tend to initiate more innovative activities than firms with founders with little or no prior R&D experience.

HYPOTHESES: FOUNDER CHARACTERISTICS AFFECTING INNOVATIVE PERFORMANCE (III)

- Founders with different functional experience and professional backgrounds are expected to have a higher probability to produce innovation.
- Therefore,
 - Hypothesis 3a: Greater heterogeneous functional experience on the young firm's founding team increases innovation
 - Hypothesis 3b: Greater heterogeneous occupational experience on the young firm's founding team increases innovation

THE DATA

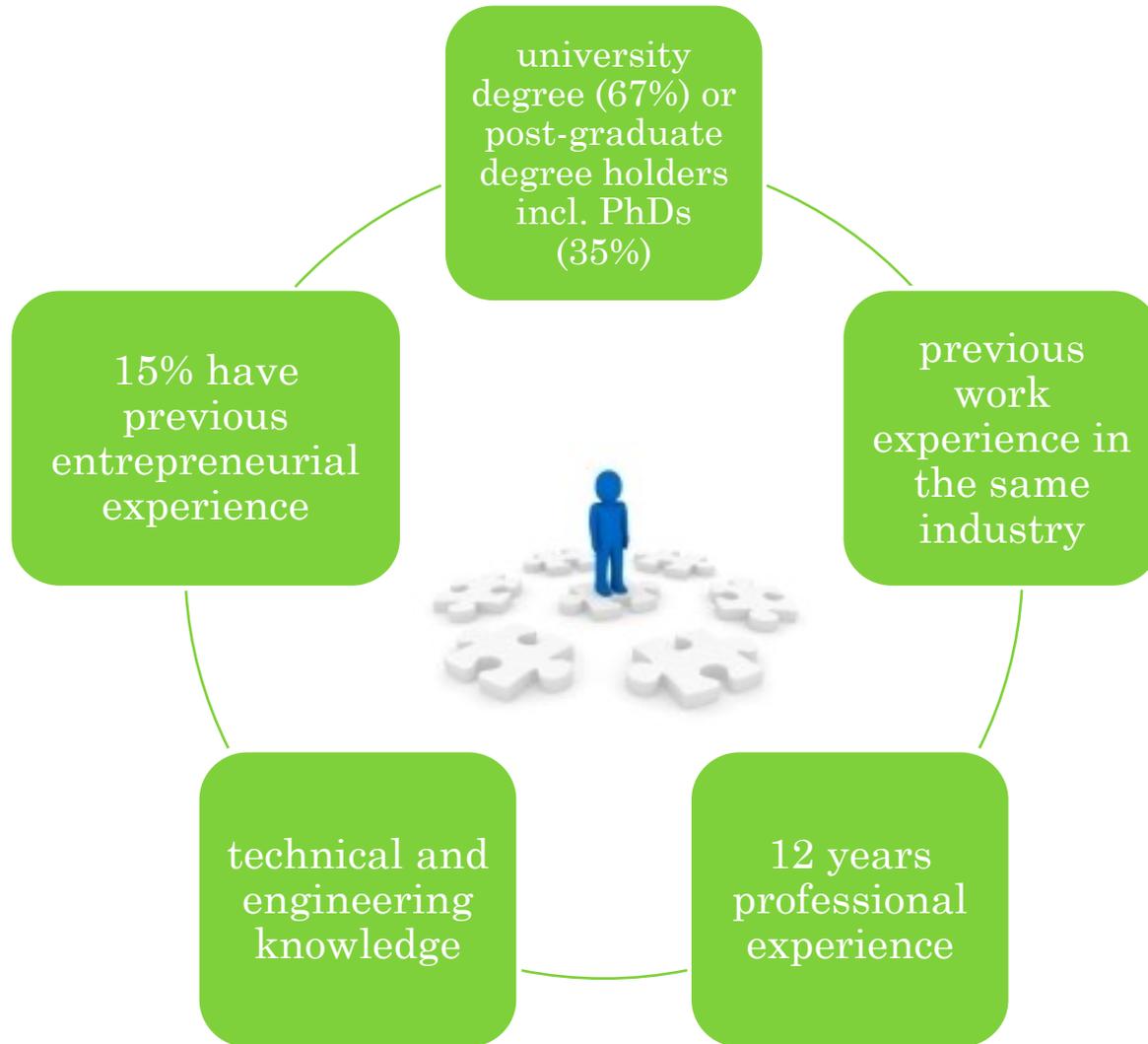
- The quantitative analysis data originate from the AEGIS project survey carried out during Fall 2010 and Spring 2011
- The sample firms were 3-10 years old spanning a wide range of sectors and originating from 10 European countries
- Data were collected through telephone interviews with one of the firm's founder using a structured questionnaire

COUNTRY & SECTORAL GROUP FIRM DISTRIBUTION IN AEGIS

Country	No of firms
Czech Republic	199
Croatia	196
Denmark	329
France	568
Germany	548
Greece	326
Italy	573
Portugal	327
Sweden	326
UK	570
Total	3962

Sectoral group	Firms
High-tech manufacturing	87
Medium high-tech manufacturing	328
Medium low-tech manufacturing	280
Low-tech Manufacturing	891
KIBS	2377
Total	3962

WHAT IS THE FOUNDERS BACKGROUND?



DETERMINANTS OF INNOVATION IN YOUNG FIRMS

<i>Founders' characteristics</i>	Radicalness of innovation	R&D Intensity
Educational attainment	***	***
Professional experience	ns	***
Prior industry experience	ns	**
Prior experience in R&D	***	***
Team diversity in functional expertise	***	**
Team diversity in occupational background	ns	ns
<i>Firm-specific characteristics</i>		
International sales	***	***
Size	***	ns
Employees with university degree	***	ns
Employees' training	**	ns
Venture capital funding	ns	***
Technology collaborations	***	***
Networking activities with universities	**	***
<i>Industry-specific variables</i>		
Price competition	***	***
Market dynamism	***	***
Medium-to-low tech manufacturing	ns	ns
Medium-to-high tech manufacturing	***	***
KIBS	ns	**

RESEARCH FINDINGS: GENERAL HUMAN CAPITAL

- Findings suggest that entrepreneurs with higher formal education will tend to invest more in R&D and at the same time are more likely to introduce a radical product innovation.
- Findings do not support the hypothesis that working experience in general has a positive impact on a young firm's innovative performance.
 - Founders' educational level might be more important to innovation compared to their general professional experience since higher education attainment can be a source of substantial value especially in contexts where the continuous absorption of complex specialized knowledge is required as a basis of competitive advantage and innovative activity.

RESEARCH FINDINGS: SPECIFIC HUMAN CAPITAL

- Previous R&D experience important both to radical innovation and R&D intensity implying that this type of knowledge is required to manage effectively available research resources, to devise R&D strategies and to organize and coordinate relative projects.
- Prior industry experience appears to impact positively R&D intensity suggesting that founders with such experience have accumulated valuable market and technology knowledge that may facilitate opportunity recognition that thus strengthen their decision to invest in specific research directions in their new venture.

RESEARCH FINDINGS: HETEROGENEITY IN FOUNDING TEAMS

- Increased diversity in terms of functional expertise, and especially the coexistence of specific types of functional expertise i.e. technological and marketing skills, enhances the ability of firms to pursue radical innovation and at the same time boosts R&D intensity.
 - This is an important finding considering that technical skills are often prioritized at the expense of complementary managerial skills required to bring products to the market.

POLICY IMPLICATIONS (I)

- Encourage single technical entrepreneurs or technically oriented founding teams to embrace business and management training or create mechanisms through which adequate support could be offered to such firms.
- Policy makers responsible for allocating financial aid to firms which undertake projects of high innovative potential should not only look for technical efficiency in a team but they should also ensure the existence of adequate managerial and business skills that will enhance firm performance.

POLICY IMPLICATIONS (II)

- Create a larger pool of high-potential would-be entrepreneurs among, for example, university graduates and people working in R&D labs in universities and research centers. This can be achieved by providing such populations with the necessary entrepreneurial skills and by cultivating, in general, a mindset for innovation and entrepreneurship.

POLICY IMPLICATIONS (III)

- Middle aged, highly educated people that used to work for large or smaller enterprises but are currently unemployed due to the crisis, downsizing, closure or delocalization of their companies should be encouraged through specific start-up programmes to complement their accumulated technical and market skills and knowledge with those skills necessary to undertake entrepreneurial action.

Thank you for your attention !