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# EURAM 2021

Reshaping capitalism for a sustainable world

16-18 June 2021

In collaboration with Université du Québec à Montréal, Canada

Online Conference



PROGRAMME BOOK



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## CONFERENCE THEME

We live in an interconnected world that faces great challenges in shaping its FUTURE. In response, we must find new ways to stimulate sustainable economic growth by creating new jobs and economic opportunities for all, serving society, protecting the environment and coping with various threats such as climate change, cyber threats, health crises and humanitarian, economic and financial crises that may arise in the aftermath of the COVID-19 pandemic. To address these challenges, we must initiate a fair dialogue among all stakeholders and groups involved. These include scholars, private and public companies, other organizations and policy-makers at the national and supranational levels. Let's work together to blur the boundaries between research and practice and find solutions for reshaping capitalism, in a context of pluralism of ideas, multiculturalism, diversity, and inclusion. Let these solutions transcend national boundaries and the narrow goals of each interest group.

The dialogue must address, openly and courageously, any dichotomies among the views of these stakeholders in regard to the timing and means for reshaping capitalism. We can learn from one each other, share ideas and engage collectively in the development of new knowledge that concerns, but is not limited to: new, sustainable paths to innovation that combine social innovation, digital innovation, artificial intelligence and human creativity; new entrepreneurial approaches that combine social entrepreneurship and financial entrepreneurship; new corporate governance practices across the world that address the competing demands of the numerous stakeholders of the Boards and the ability of companies to withstand a crisis; new approaches to strategy & corporate finance that help corporations to balance between their global approaches and their markets' local needs; new, innovative and sustainable HRM practices and leadership styles in different cultural contexts; new business models aimed at creating economic, social and environmental value and sustainable patterns of consumption; new business practices and public policies throughout the world that seek to improve the wellbeing of our society, the health of our people, the future of our planet, and the strengths of our businesses, financial markets and industries.

We invite you to join us in Montreal, a multicultural and well-connected 'smart' city, to assist in the creation of a new trend in action-oriented research by adopting a holistic view of the creation of new knowledge by transdisciplinary thinking that transcends boundaries between sciences – whether management science, social science, environmental science, health science, communication, education, ICT or other related sciences.

## Conference Programme Committee

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## About ESG-UQAM

The University of Quebec in Montreal (UQAM) is a French-language university located in downtown Montreal. With its six faculties and a business school (ESG), 170 undergraduate programs, 110 graduate programs, 30 doctoral programs and more than 39,000 students (2019), UQAM has established itself as one of the leading universities in Canada. The School of Management Sciences (École des sciences de la gestion, ESG) is the largest academic unit at UQAM. Its modern campus, which houses more than 15,000 students, is nestled between two of the city's liveliest districts, the "Quartier des spectacles" (Entertainment district) and the Quartier Latin (Latin Quarter) which is reminiscent of the old Europe.



## About Montreal

As a major city in one of the most prosperous and safest countries in the world, Montreal is resolutely turned towards innovation. Its network of research facilities in leading strategic industries - such as aerospace, engineering, finance, insurance, life sciences, information and communications technology - has attracted some of the brightest minds from around the world and large multinational corporations. Visitors to Montreal enjoy the mix of North American and European cultures, the warm "Bonjour" welcome and vibrant Montreal neighborhoods. From historic Old Montreal to the trendy downtown district, attendees will enjoy the blend of big-city style and small-town hospitality, and its legendary cultural and gastronomic scenes, with a multitude of restaurants, shopping centers, nightlife and entertainment, and numerous hotels with a total capacity of over 35,000 rooms, to suit all tastes and budgets. Each year, Montreal welcomes more than 11 million visitors and an impressive number of conventions, events and international festivals. Montréal's warmth, cosmopolitan character and geographic accessibility will ensure that the EURAM 2021 Conference will be the most successful and memorable ever.

## Further information

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## Track Sessions per day

Paper Development Session (08:00 - 09:30)

Track: GT03\_00 - Entrepreneurship General Track

Chair(s): Marzena Starnawska, Beata Glinka, Jörg Freiling, Luca Gnan, Hans Lundberg, Matthias Raith, Marcela Ramírez-Pasillas

Paper Presentations:

**1721 WHEN WOMEN LEAD COMPANIES: THE ROLE OF WOMEN IN ITALIAN RESEARCH SPIN-OFF COMPANIES.**

Valentina Cucino	SCUOLA SUPERIORE SANT'ANNA
Nicola Del Sarto	SCUOLA SUPERIORE SANT'ANNA
Mariacarmela Passarelli	UNIVERSITY OF CALABRIA

**1449 THE EMPTY CANVAS: USING CREATIVE ARTS TO ELICIT PERCEPTIONS OF ENTREPRENEURSHIP AMONG POSTGRADUATE LEARNERS**

Rita Klapper	MANCHESTER METROPOLITAN UNIVERSITY
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**1913 DISCONNECTEDNESS FROM THEIR HOMELAND: DISPLACED MIGRANT ENTREPRENEURSHIP IN TIMES OF COVID-19**

Tenzin Yeshi	UNIVERSITY OF BREMEN
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PDS Business Model 1 (08:00 - 09:30)

Track: ST03\_01/ST06\_01/ST13\_01 - Business Model - Strategy, Innovation, and Entrepreneurial Venturing (co-sponsored ENT / INNO / SM)

Chair(s): Dirk Schneckenberg

Paper Presentations:

**1042 CAN DIGITALIZATION FAVOUR THE EMERGENCE OF INNOVATIVE AND SUSTAINABLE BUSINESS MODELS?**

Chiara Acciarini	LUISS UNIVERSITY
Francesca Capo	UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA
Francesco Cappa	LUISS
Fernando Borelli	UNIVERSITÀ LUISS
Chiara Sarrocco	UNIVERSITÀ LUISS

**1967 RECAPTURING INNOVATION: A CASE STUDY OF NEOBANKING WITH A SOCIAL MISSION**

NATHALIE DURAN	IAE REUNION
Arvind ASHTA	CEREN, EA 7477, BURGUNDY SCHOOL OF BUSINESS - UNIVERSITÉ BOURGOGNE FRANCHE-COMTÉ, FRANCE, ARVIND.ASHTA@BSB-EDUCATION.COM
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Valentina Cucino, Scuola Superiore Sant'Anna  
Nicola Del Sarto, Scuola Superiore Sant'Anna (**Primary Presenter**)  
Mariacarmela Passarelli, University of Calabria

**Title:**

When women lead companies: the role of women in Italian research spin-off companies.

**Abstract:**

*The literature in behavioral psychology and entrepreneurship has extensively studied gender-based behavioral differences. Several authors have investigated the role of women in entrepreneurship, however few studies have yet been conducted on research spin-off companies. This study aims to investigate the role of women on the board of the spin-off company. In particular, we use secondary data from 166 Italian research spin-offs showing how the presence and percentage of women on the board influences the performance of the research spin-off company in terms of profitability. The research results could provide important insights for the establishment of entrepreneurial teams to all the players that rotate within the innovation ecosystem and in particular to universities, technology transfer offices, academic incubators and mentoring programs.*

**SIG:**

SIG 03 - ENT - Entrepreneurship

**Track:**

GT03\_00 - Entrepreneurship General Track

**Keyword 1 (one word):**

female manager

**Keyword 2 (one word):**

research spin-off

**Keyword 3 (one word):**

firm performance

**UN Sustainable Development Goals (SDGs):**

Goal 5: Gender equality

**Acting as discussant:**

No

**Acting as session chair:**

Yes

**Authors' Names:**

Yes

**Abstract:**

Yes

**Paper:**

**View File - [1721\\_Paper\\_0112052622.pdf](#)**

**Declaration of commitment:**

YES, I (or my co-authors) agree to register and attend EURAM2021 to present the paper I am submitting.

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**Reviewer Signup**

**Submitter:**

Valentina Cucino, Scuola Superiore Sant'Anna

No submission found.

**Submitter:**

Nicola Del Sarto, Scuola Superiore Sant'Anna

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**Submitter:**

Mariacarmela Passarelli, University of Calabria

No submission found.

# **When women lead companies: the role of women in Italian research spin-off companies.**

## **Abstract**

*The literature in behavioral psychology and entrepreneurship has extensively studied gender-based behavioral differences. Several authors have investigated the role of women in entrepreneurship, however few studies have yet been conducted on research spin-off companies. This study aims to investigate the role of women on the board of the spin-off company. In particular, we use secondary data from 166 Italian research spin-offs showing how the presence and percentage of women on the board influences the performance of the research spin-off company in terms of profitability. The research results could provide important insights for the establishment of entrepreneurial teams to all the players that rotate within the innovation ecosystem and in particular to universities, technology transfer offices, academic incubators and mentoring programs.*

**Key words:** Gender diversity, female manager, research spin-off, firm performance.

## **1. Introduction**

There are several ways in which the exploitation of university research can take place: patents and licenses; consultancy and research collaborations with companies; and spin-offs. The creation of spin-offs is the most complex way to commercialize academic research in terms of process, people involved, risks, etc. (Iacobucci and Micozzi, 2015; Thursby and Thursby, 2005). In recent decades, academic spin-offs have received increasing attention from researchers and policy makers because of their ability to create wealth and advance scientific knowledge (Mustar et al; 2006; Mustar et al., 2008).

Research spin-offs are defined as "companies that evolve from universities through the commercialization of intellectual property and the transfer of technology developed within academic institutions" (Djokovic & Souitaris, 2008). There are three types of companies: (1) companies founded by university researchers to directly exploit the results of their research; (2) companies founded by students and graduates who make use of the skills and knowledge acquired by the university; (3) companies founded by external parties that exploit the results of university research (Iacobucci & Micozzi, 2015). Regardless of the type of research spin-off, research spin-offs have a high technological profile, recognized in various sectors. However, despite the high technological profile of most university enterprises, many have difficulty in achieving certain results in terms of financial performance (Ensley and Hmieleski 2005).

The difficulty for spin-offs to "take off" has been the subject of study by numerous researchers and policy-makers (Payne, 1987; Azagra-Caro and Llopis, 2018). Within the literature on research spin-offs, some authors attribute a relevant role to the composition of top management (Heirman and Clarysse 2004, Mustar et al. 2008, Müller 2010). However, few studies have yet influenced the role of female influence within the top management of a research spin-off.



Based on these premises, the present study aims to answer the following research questions: does the presence of women on the board of the research spin-off influence its performance?

The present study uses secondary data from Italian research spin-offs.

The results show a positive relationship between the percentage of female representation in top management teams and the performance of RSOs. Furthermore, our results highlight a positive correlation between the presence of a woman on the board and the performance of RSOs. their male colleagues without any inferiority complex due to the common academic background. Furthermore, in this research context, the specific attributes of women have proven to be a valuable resource in support of the business and the performance of the company.

The study is organized as follows. Session two investigates the role of women within research spin-offs. Session three describes the methodology adopted and session 4 and 5 discusses the results.

## **2. The role of women in top management of RSO and performance**

Several authors have analyzed the role of women within spin-off research firms (La Rocca et al., 2017; Smith et al., 2006). Mensi and Klarbach (2014) argue that the effect of women in top management teams on the performance of companies also depends on the peculiarities of the context and the characteristics of the top management team. Florida (2004), states that research contexts possess characteristics such as tolerance, understood as openness to diversity and gender. This feature allows to include the female team more (Visintin and Pittino, 2014). In fact, the vast majority of the literature argues that the research context has a higher degree of gender equality and this means that women have more equal access to resources and opportunities in terms of employment and political empowerment (Hausmann et al. 2012; Nielsen and Huse, 2010).

Furthermore, although leadership appears to be more associated with male traits, female leadership is often interpreted as inconsistent with women's gender roles (Geiler and Renneboog, 2015). This concept, called "leadership romance" demonstrates that the effect of female executives on corporate performance is no different from that of male executives. In fact, the presence of women on the board of a research spinoff could favor the presence of an inclusive climate and therefore develop greater self-confidence and self-efficacy beliefs that can increase their creativity and participation in decision-making processes (Stoermer et al. 2016).

Some studies correlate the female representation of senior executives with corporate performance (Post and Byron 2015; Terjesen 2009). The positive influence of women is likely related to the personal characteristics of women. In fact, women are more likely to possess a "sentimental" cognitive style, that is, a behavior that emphasizes harmony, than their male counterparts (Stroebe et al., 2017). This style is likely to enable women to inspire trust between peers and subordinates, to share information and power, to bring people together and to respond to challenges (Dezsö, and Ross, 2012; Hurst et al., 1989). Additionally, women play multiple roles in their personal life, including marital, parenting, or branch office, traits that amplify multitasking skills and enrich their interpersonal and leadership skills (Ruderman et al. 2002; Whittington and Smith–Doerr 2005).

Female managers with a higher education degree appear to have a significant and positive influence on performance (Smith et al. 2006). Therefore, it is possible to argue that this effect is stronger considering the competences of the Universities and Research Centers to which the management RSOs belong (Blackburn et al. 1994; Watson, and Robinson, 2003 ). On the basis of these premises, we build our hypotheses:

H1: An high presence of women in board increase RSOs' performance

H2: The presence of woman in the board increase RSOs' performance

### **3. Methods**

#### **3.1 Data**

The analysis is based on a sample of data based on Orbis -Bureau Van Dijk (a database that provides information on financial statements, ratios, activities, and information on managers and ownership structure about listed and unlisted companies in Europe), extracting financial and non-financial data according to a list of RSOs collected and double checked to ensure that each firm is a research spin-off. We collected all Italian RSO names and BVDId numbers from the website [www.netval.it](http://www.netval.it). Netval is a non-profit association, having public and private Italian Universities and Research Institutes as partners, whose main target is the promotion and enhancement of academic research. After an accurate integration of data, we obtained an exhaustive and trustworthy sample of 166 active RSOs, either from universities or public Research Institutes, updated in December 2020. After defining a reliable list of effective Italian RSOs, we moved on the second step of the analysis, collecting data on these RSOs. For the 1074 active RSOs, we collected from Orbis all financial and other data from 2015 to 2020, conducting a search by using the BVDId numbers. Orbis also provides data, in terms of time series, on management features.

#### **3.2 Independent variable: Firm performance**

As common in the literature, we use *Profitability*, based on the ration between Ebit (Earnings Before Interest, Taxes) and total asset as dependent variable and measure of performance. Considering that in the early stage of a new venture it is difficult to access financial information, it is considered that higher internal resources and profitability is a proxy of better RSO' performance to appreciate the role of managers, being also the founders, in RSO (Prencipe, 2016).

### **3.3 Dependent variables: Female Presence and Percentage Female**

The dependent variables were calculated considering the presence of females in the board and their percentage. The first variable *FemalePresence* was calculated as a dummy variable, taking the value of one if there was at least one female in the board and zero otherwise. The variable *PercentageFemale* was calculated considering the ratio between the number of women and the total number of managers in the board.

### **3.4 Control variables**

We use a broad set of additional control variables, many of which are commonly found in research on top management teams. In particular account for variables considered as a proxy of the size of the firm such as *LogTurnover*, calculated as the logarithmic transformation of the total turnover of the firm, and the variable *Employees* calculated as the number of employees for each year. Moreover, we control for *FirmAge*, with firm birth determined by the earlier of the firm's first year in Orbis -Bureau Van Dijk, for *ROE* (return on investments).

Table 1 provides a description of all the variables used in the current work.

**Table 1**

Mean, Standard Deviation, and Correlation Matrix

Variable	Mean	Standard Deviation	Min.	Max.	1	2	3	4	5	6	7
Profitability	0.056	0.303	-3.191	0.898	1						
EmployeePresence	0.206	0.405	0	1	-0.01	1					
AgeFemale	8.136	19.876	0	100	0.08	0.35*	1				
Turnover	3.999	2.380	-3.855	8.322	-0.10	0.15	0.02	1			
Employees	2.699	3.729	2	32	0.27*	-0.02	0.01	-0.06	1		
firmAge	5.639	1.234	4	14	0.49*	0.08	0.13	-0.09	0.14	1	
Netasset	111.5368	334.015	-814.949	4124.55	0.01	-0.08	-0.16*	-0.06	-0.04	-0.08	0.07
ROE	7.101	96.882	-918.301	232.645	-0.07	0.02	0.19	-0.08	0.07	0.12	0.04

### 3.5 Statistical analysis

As mentioned, we test our hypotheses regarding the effect of female representation in top management on firm performance, while controlling for the many idiosyncratic and unobservable factors that may simultaneously affect a firm's performance and make the firm's work environment more or less congenial to women managers. As we collected longitudinal data starting from 2015, we included firm fixed effects in all of our regressions. Such an analysis consists in the inclusion of a dummy variable for each firm, thus testing implicitly each firm with itself.

## 4. Empirical Results

Table 4 shows the results with regard to hypothesis H1a concerning the effect of females on RSO performance. The table reports the results of fixed effect panel data analysis for both the dependent variables represented by *FemalePresence* and *Percentagefemale* and the independent variable *Profitability*. The results of our analysis confirmed hypothesis H1 and H2. The results show a positive relation between the percentage of female representation in top management teams and performance of RSOs. Moreover, our results highlight a positive correlation between the presence of a woman in the board, and the performance of RSOs. Women with an executive role within an RSO, more than in other firms, feel free to work shoulder to shoulder with their male colleagues without any inferiority complex because of the common academic background. Moreover, in this research context, female-specific attributes are shown to be a valuable resource in supporting the business and firm performance.

Table 2 Female representation in top management and firm performance

	Profitability	
	1	2
FemalePresence		0.3338*** (0.5988)
PercentageFemale	0.0097*** (0.0019)	
LogTurnover	0.0317*** (0.0070)	0.0299*** (0.0069)
Employees	0.0021 (0.0035)	0.0024 (0.0035)
FirmAge	-0.0246 (0.0631)	-0.0251 (0.0629)
Netasset	-0.0001* (0.0001)	-0.0001* (0.0001)
ROE	0.0012*** (0.0001)	0.0012*** (0.0001)
Year Fixed Effects	Y	Y
Firm fixed effects	Y	Y
Number of observations	730	730
R <sup>2</sup>		

\*\*\*p ≤ 0.01, \*\*p ≤ 0.05, \*p ≤ 0.10. Standard errors are reported under each coefficient in parentheses.

## 5. Conclusion and discussion

This study aims to investigate the role of the presence of women on the board of research spin-offs. The study contributes to the research spin-off literature in three ways. First, the results show a positive relationship between the percentage of female representation in top management teams and the performance of RSOs. This first evidence assumes that the high specialization of female managers increases the performance of the research spin-off company. Second, our results show a positive correlation between the presence of a woman on the board and the performance of RSOs. This shows that women with an executive role within an RSO, more than in other companies, feel free to work side by side with their male colleagues without any inferiority complex due to the common academic background (Fox, 2001). Third, in this research context, the specific attributes of women have proven to be a valuable resource in support of business and company performance.

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Table 1 – Variable descriptions.

<i>Variables</i>	<i>Descriptions</i>
<b><i>Dependent variables</i></b>	
<i>Profitability</i>	Ratio between EBITDA (earnings before interest, tax, depreciation, and amortization) and the value of total assets
<b><i>Main explanatory variables</i></b>	
<i>% female manager</i>	Variable that specifies the ratio between the number of female managers in the company and the total number of managers
<i>Female x RSO</i>	% of female managers for RSOs only
<i>Female x Start-ups</i>	% of female managers for Innovative Start-ups only
<i>Female x Comparables</i>	% of female managers for Comparables only
<i>Dummy RSOs</i>	Dummy that identifies the RSOs
<i>Dummy Comparables</i>	Dummy that identifies the comparables
<i>Dummy Start-ups</i>	Dummy that identifies the Innovative Start-ups
<i>Dummy dominant female manager</i>	Dummy equal to 1 if the % of female manager is greater than 0.5, 0 otherwise
<i>Dummy dominant female manager in firms with female owners</i>	Dummy equal to 1 if the variable “Dummy dominant female manager” is equal to 1 and there is at least one female owner on the board, 0 otherwise
<i>Dummy female</i>	Dummy equal to 1 if there is at least a woman on the board of managers, 0 otherwise
<i>Dummy all females in management</i>	Dummy equal to 1 if the variable “% female manager” is equal to 1; therefore, all the managers in the firms are female
<i>Dummy Female × Age of Female</i>	Interaction between Dummy female and average age of female managers
<b><i>Control variables</i></b>	
<i>Management tenure</i>	Ratio between the average permanence in the firm of all managers (each permanence is calculated in days from the appointment date) and the life (in days) of the firm itself
<i>Growth Opportunities</i>	Value of the intangibles divided by total assets

<i>Size</i>	Natural log of total assets
<i>Dummy Financial Debt</i>	Dummy equals 1 if the firm has debt of any kind (short/long), 0 otherwise
<i>Dummy Venture Capital</i>	Dummy equals 1 if there is at least one venture capitalist on the board, 0 otherwise
<i>Ownership</i>	Natural log of the total number of shareholders
<i>Dummy North</i>	Dummy equals 1 if the firm is located in northern Italy, 0 otherwise
<b><i>Instrumental variables</i></b>	
<i>Average female manager RSO (industry mean)</i>	Average value of the percentage of women inside the board of managers for RSOs at the industry level
<i>Average female manager Start-ups (industry mean)</i>	Average value of the percentage of women inside the board of managers for Innovative Start-ups at the industry level
<i>Average female manager Comparables (industry mean)</i>	Average value of the percentage of women inside the board of managers for Comparables at industry level

Table 2 – Descriptive statistics.

	<b>Academic Spin-off</b>			<b>Comparables</b>			<b>Innovative Start-ups</b>		
	Mean	Media n	SD	Mean	Media n	SD	Mean	Media n	SD
Profitability	0.007	0.047	0.414	0.021	0.049	0.356	- 0.096	0	0.485
% female managers	0.164	0	0.336	0.045	0	0.177	0.085	0	0.255
Female manager's age (years)	42.95	40.35	8.78	41.17	42.05	7.75	49.33	53.42	15.46
Dummy dominant female manager	0.181	0	0.385	0.049	0	0.215	0.104	0	0.306
Dummy all females in management	0.117	0	0.322	0.024	0	0.154	0.06	0	0.238

Dummy female manager & shareholder	0.102	0	0.302	0.045	0	0.207	0.03	0	0.171
Management tenure	0.509	0.4	0.351	0.497	0.497	0.413	0.69	0.898	0.353
Growth Opp.	0.147	0.043	0.21	0.114	0.012	0.186	0.293	0.205	0.267
Size	531.35 3	178.96 5	1.156.033	1.141.33 0	247.55 0	2.565.57 3	289.11 0	82.825	698.518
Dummy Financial Debt	0.426	0	0.495	0.583	1.000	0.494	0.377	0	0.485
Dummy Venture Capital	0.06	0	0.238	0.036	0	0.188	0.171	0	0.377
Ownership	7.908	7.000	6.081	6.866	4.000	10.988	4.683	4.000	4.691
Dummy North	0.626	1.000	0.484	0.769	1.000	0.422	0.685	1.000	0.465

Notes: Number of Academic Spin-off = 1074. Number of Comparables = 711. Number of Innovative Start-ups = 2851. Size refers to total asset in Euros and concerns the number of shareholders; in the regression, the log is used for both. For the calculation of the mean for Female manager's age (years) we consider only women.

Table 3 – Correlations.

<b>Academic spinoff sample</b>		1	2	3	4	5	6	7	8	9	10	11		
1	Profitability	1.000												
2	% female managers	0.077	1.000											
3	Female manager's age (years)	0.074	0.911	1.000										
4	Dummy dominant female manager	0.082	0.940	0.891	1.000									
5	Dummy all females in management	0.060	0.908	0.697	0.777	1.000								
6	Dummy female manager & shareholder	0.059	0.586	0.628	0.544	0.444	1.000							
7	Management tenure	-0.135	0.019	0.009	0.025	0.008	0.063	1.000						
8	Growth Opp.	-0.129	0.036	0.078	0.013	0.018	0.039	0.123	1.000					
9	Size	0.056	-0.111	-0.078	-0.093	-0.107	-0.118	-0.250	0.061	1.000				
10	Dummy Financial Debt	-0.021	0.067	0.102	0.071	0.041	0.027	-0.074	-0.016	0.373	1.000			
11	Dummy Venture Capital	0.074	-0.052	-0.053	-0.056	-0.017	-0.035	-0.189	-0.085	0.117	0.130	1.000		
12	Ownership	0.053	-0.081	-0.096	-0.092	-0.035	-0.082	-0.153	-0.066	0.159	0.007	0.000	1.000	
13	Dummy North	0.073	-0.056	0.004	-0.015	-0.113	-0.053	-0.046	-0.019	0.156	0.120	-0.000	0.000	1.000

<b>Comparables sample</b>		1	2	3	4	5	6
1	Profitability	1.00					
2	% female managers	0.02	1.00				
3	Female manager's age (years)	0.03	0.84	1.00			
4	Dummy dominant female manager	0.04	0.90	0.86	1.00		
5	Dummy all females in management	0.01	0.85	0.46	0.69	1.00	

<b>Innovat. Start-ups sample</b>		1	2	3
1	Profitability	1.00		
2	% female managers	0.03	1.00	
3	Female manager's age (years)	0.03	0.90	1.00
4	Dummy dominant female manager	0.05	0.94	0.91
5	Dummy all females in management	0.00	0.91	0.68
6	Dummy female	-0.03	0.52	0.45

6	Dummy female manager & shareholder	0.03	0.65	0.77	0.59	0.34	1.00
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Industry dummies are not reported. Correlations greater than 0.03 or lower than -0.03 are statistically significant at the 0.05 level or lower.

	manager & shareholder			
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Industry dummies are not reported. Correlations greater than 0.03 or lower than -0.03 are statistically significant at the 0.05 level or lower.



Table 4 - Results concerning the percentage of female representation in top management and firms' performance in Research Spin-Off, Innovative Start-ups and Comparables.

	(1)	(2)
	Performance	Performance
	OLS	IV model
%Female x RSO	0.146*** (0.000)	0.273*** (0.000)
%Female x Start-ups	0.115 (0.203)	-0.00645 (0.963)
%Female x Comparables	0.0461 (0.653)	0.696 (0.246)
Dummy RSOs	-0.0315 (0.628)	-0.0631 (0.199)
Dummy Comparables	-0.0222 (0.768)	-0.0647 (0.303)
Dummy Start-ups	-0.0641 (0.389)	-0.0653 (0.167)
Management tenure	-0.110*** (0.009)	-0.105*** (0.000)
Growth Opportunities	-0.215*** (0.000)	-0.216*** (0.000)
Size	0.0224** (0.049)	0.0242*** (0.000)
Dummy Financial Debt	-0.0740**	-0.0821***

	(0.017)	(0.000)
Dummy Venture Capital	0.0482 (0.179)	0.0559 (0.143)
Ownership (log)	-0.00374 (0.850)	-0.00556 (0.710)
Dummy North	0.0621* (0.080)	0.0634*** (0.002)
Observations	2101	2101
<i>Adjusted R<sup>2</sup></i>	0.054	0.038
Underidentification test (Anderson canon. corr. LM statistic)		131.624 (0.0000)
Weak identification test (Cragg-Donald Wald F statistic)		34.403
Sargan statistic		equation exactly identified
Endogeneity test		3.403 (0.0651)

p-values in parentheses. Industry and Year fixed effect are included as controls. An OLS model is used in column (1). The IV technique is used in column (2) using the following IV: = Average value of the percentage of women inside the board of manager for RSOs, Innovative Start-ups and Comparables at the industry level, voting rate at county level\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . The intercept has been omitted to allow for full interaction terms.

Table 5 - Results concerning dominant female representation in top management and firms' performance in research spin-offs, innovative start-ups and comparables.

	(1)	(2)	(3)
	Performance	Performance	Performance
	IV model	IV model	IV model
Dummy dominant female manager RSO	0.225*** (0.000)		
Dummy dominant female manager Start-ups	0.010		

	(0.939)		
Dummy dominant female manager Comparables	0.509		
	(0.295)		
Dummy all females in management RSO	0.346***		
	(0.000)		
Dummy all females in management Innovative Start-ups	-0.018		
	(0.900)		
Dummy all females in management Comparables	1.236		
	(0.222)		
Dummy female manager & shareholder x RSO		0.362***	
		(0.000)	
Dummy female manager & shareholder x Start-ups		0.053	
		(0.816)	
Dummy female manager & shareholder x Comparables		0.702	
		(0.235)	
<hr/>			
Dummies "Samples"	Yes	Yes	Yes
Control variables	Yes	Yes	Yes
<hr/>			
Observations	2101	2101	2101
$R^2$	0.060	0.026	0.043
Adjusted $R^2$	0.042	0.007	0.024
Underidentification test (Anderson canon. corr. LM statistic)	76.171	51.227	45.575
	(0.0000)	(0.0000)	(0.0000)
Weak identification test (Cragg-Donald Wald F statistic)	19.485	12.908	11.414
Sargan statistic	equation exactly identified	equation exactly	equation exactly identified

		identified	
Endogeneity test	3.746	7.137	7.287
	(0.0529)	(0.0076)	(0.0069)

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*p*-values in parentheses Industry and Year fixed effect are included as controls. In all the columns, the IV technique is used. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  The intercept has been omitted to allow for full interaction terms.

