PICCOLA IMPRESA

SMALL BUSINESS

RIVISTA INTERNAZIONALE DI STUDI E RICERCHE

n. 1 - anno 2021

- A theory-informed practice of entrepreneurship education for university students
- Students' entrepreneurial intentions: an overview
- The role of family, personality traits and self-efficacy in students'entrepreneurship
- Determinants and success factors of student entrepreneurship
- Fostering student entrepreneurial skills
- Administrative and accounting structures in SMEs
- The passion between consumption and entrepreneurship: cases of publishers



ASSOCIAZIONE PER LO STUDIO DELLA PICCOLA E MEDIA IMPRESA ASPI

Associazione per lo studio della Piccola e Media Impresa Via Saffi, 42 61029 Urbino (PU) www.rivistapiccolaimpresa.it

Redazione Rivista Piccola Impresa/Small Business® Via Saffi, 42 61029 Urbino (PU) www.rivistapiccolaimpresa.it

Rivista accreditata AIDEA

Codice ISSN 0394-7947 ISSNe 2421-5724

®Registrazione del Tribunale di Urbino n. 204 del 16.6.2001 - Registro Periodici - Quadrimestrale - Contiene meno del 50% di pubblicita - Copyright® by ASPI. Stampato presso lo stabilimento tipografico ROTOGRAF di Fermignano (PU).

Piccola Impresa/Small Business è una rivista quadrimestrale interamente dedicata alla pubblicazione di studi e ricerche sulla piccola e media impresa. È stata fondata nel 1987 dall' Associazione per lo Studio della Piccola e media Impresa (A.S.P.I.), Università degli Studi di Urbino "Carlo Bo", via Saffi 42, Urbino.

Piccola Impresa/Small Business is published every four months and is entirely devoted to the problems of small and medium-sized firms. It was started in 1987 by the Associazione per lo studio della piccola e media impresa (Aspi), Università degli Studi di Urbino "Carlo Bo", via Saffi 42, Urbino.

Comitato Promotore (Promoting Editorial Advisory Board): Sue Birley (Imperial College London); Roberto Cafferata (Università di Roma -Tor Vergata-), Raymond Collard (Facultés Universitaires Notre Dame de la Paix, Namur), Gianni Cozzi (Università di Genova), Francesco Galgano (Università di Bologna), Pierre Louart (Université de Lille), Isa Marchini (Università di Urbino), John McGee (Oxford Templeton College), Guido M. Rey (Università di Roma), Umberto Romagnoli (Università di Bologna), Roy Rothwell (University of Sussex), John Stanworth (Westminster University), David Storey (University of Warwick), R.E. Thomas (University of Bath), Sergio Vaccà (Università L. Bocconi, Milano), Joseph Waldman (University of Indiana).

Amministrazione e distribuzione (Administration and distribution): A.S.P.I. (Associazione per lo Studio della Piccola Impresa), c/o Dipartimento di Economia Società Politica (DESP), Via Saffi 42, 61029 Urbino (PU) – Andrea Buratti (cell. 338/1700434), Federica Palazzi (cell. 349/8525921) Email: andrea.buratti@uniurb.it - Web: http://rivistapiccolaimpresa.uniurb.it

ORGANI RIVISTA

ITALIANO	INGLESE	Nome	Università
Direttore Responsabile	Editor in Chief	Tonino Pencarelli	Università degli Studi di Urbino
Direttori Co-Editors		Francesca Maria Cesaroni	Università degli Studi di Urbino
Scientifici	in Chief	Paola Demartini	Università degli Studi Roma Tre
		Roberta Bocconcelli	Università degli Studi di Urbino
		Léo Paul Dana	Dalhousie University
Condirettori	Associate	Mara Del Baldo	Università degli Studi di Urbino
	editors	Roberto Grandinetti	Università degli Studi di Padova
		Luca Iandoli	Università degli Studi di Napoli Federico II
		Selena Aureli	Università di Bologna
		Robert A. Blackburn	Kingston University
		Massimo Ciambotti	Università degli Studi di Urbino
		Marco Cioppi	Università degli Studi di Urbino
		Giovanni Battista Dagnino	Libera Università LUMSA di Roma - Palermo Campus
		Alfredo De Massis	Free University of Bozen-Bolzano
		Giacomo Del Chiappa	Università degli Studi di Sassari
		Alex Douglas	Management University of Africa
	Editorial Board	John C. Dumay	Macquarie University
		Susanne Durst	Tallin, Universiy of Technology
		Emilio Esposito	Università degli Studi di Napoli Federico II
		Pietro Evangelista	Consiglio Nazionale delle Ricerche - CNR
		Anestis K. Fotiadis	Zayed University
		Barbara Francioni	Università degli Studi di Urbino
Comitato Editoriale		Paolo Gubitta	Università degli Studi di Padova
		Simone Guercini	Università degli Studi di Firenze
		Michela Marchiori	Università degli Studi Roma Tre
		Federica Murmura	Università degli Studi di Urbino
		Fabio Musso	Università degli Studi di Urbino
		Alessandro Pagano	Università degli Studi di Urbino
		Federica Palazzi	Università degli Studi di Urbino
		Federica Pascucci	Università Politecnica delle Marche
		Renato Passaro	Università degli Studi di Napoli
		Andrea Perna	Uppsala Universitet
		Elisabetta Savelli	Università degli Studi di Urbino
		Salvatore Sciascia	Università Cattaneo - LIUC
		Annalisa Sentuti	Università degli Studi di Urbino
		John Stanworth	University of Westminster
		Annalisa Tunisini	Università cattolica del Sacro Cuore
		Lorenzo Zanni	Università di Siena
		Antonella Zucchella	Università degli Studi di Pavia
Segretario di redazione	Managing Editor	Andrea Buratti	Università degli Studi di Urbino

		Selena Aureli	Università di Bologna
Segreteria di redazione	Editorial office	Federica Palazzi	Università degli Studi di Urbino
reduzione		Annalisa Sentuti	Università degli Studi di Urbino
		Francesca Sgrò	Università degli Studi di Urbino

LIST of Referees 2020

Agliata Francesco, University of Naples Federico II, Italy Aureli Selena, University of Bologna, Italy Basile Vincenzo, University of Naples Federico II, Italy Bernardi Andrea, Oxford Brookes University, United Kingdom Bocconcelli Roberta, University of Urbino Carlo Bo, Italy Bolzani Daniela, Università Cattolica del Sacro Cuore, Italy Botti Antonio, University of Salerno, Italy Brinkerink Jasper, Free University of Bozen, Italy Cesaroni Fabrizio, University of Messina, Italy Chiarvesio Marina, University of Udine, Italy Crudele Chiara, University of Salerno, Italy Cuomo Maria Teresa, University of Salerno, Italy Del Bosco Barbara, University of Milano-Bicocca, Italy Feranita Feranita, Taylor's University, Feranita@Taylors.Edu.My Guercini Simone, University of Florence, Italy Lombardi Rosa, Sapienza University of Rome, Italy Maalaoui Adnane, IPAG Business School, France Majocchi Antonio, University of Pavia, Italy Marin Giovanni, University of Urbino Carlo Bo, Italy Matricano Diego, University of Campania L. Vanvitelli, Italy Núñez-Cacho Utrilla Pedro, University of Jaén, Spain Palazzi Federica, University of Urbino Carlo Bo, Italy Paolini Antonella, University of Macerata, Italy Pascucci Federica, Marche Polytechnic University, Italy Pencarelli Tonino, University of Urbino Carlo Bo, Italy Perna Andrea, Marche Polytechnic University, Italy Riviezzo Angelo, University of Sannio, Italy Roberto Fabiana, University of Naples Federico II, Italy Todisco Lucio, University of Naples Federico II, Veglio Valerio, Free University of Bozen, Italy Vesci Massimiliano, University of Salerno, Italy Zucchella Antonella, University of Pavia, Italy

Individual subscription (License agreement for online access to editorial content)
18,00 € + VAT 22%= 22 €
The agreement allows to access through a single username and password. To subscribe you need to visit the web site of the review (http://rivistapiccolaimpresa.uni-urb.it) and register by filling in a specific form in the "register" section. As to payment two methods are allowed: by Paypal accessible from: the "about" section - > subscriptions - > subscription button*** by bank transfer, to the IBAN address: IT42 U0605568700000000008 732 specifying: "username (year) PI/SB +username"
After having verified payment, the subscription will be activated
***All users must register their credit card in the Paypal system, otherwise you will not be allowed to effect pay- ment
Institutional Subscription: (License agreement for online access to editorial content)
100,00 € + VAT 22%
The agreement allows the access IP on from more workstations trough Torrosa Casalini's system. Payment can be made by bank transfer to: IT42 U06055687000000000008 732 specifying: "username (year) PI/SB +username"
Both subscription allow to access to three annual numbers and previous numbers which are not under a one-year embargo.

ECSB – ICSB NEWS

The main theme is "Inclusive Entrepreneurship" on November 18-20, 2021 RENT XXXV will take palce in Turku, Finland

ESU 2021 Conference and Doctoral Program University of Groningen, August 29 - September 4

Leuphana Transformational Entrepreneurship Days September 21 @ 9:00 am - September 23 @ 12:30 pm UTC+1

4th PISB Conference "Beyond the crisis: what is the future for small businesses? Challenges, opportunities and lessons learned", hosted virtually, University of Urbino, December 3

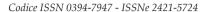
For more information see: www.ecsb.org and https://icsb.org/

SPECIAL ISSUE: STUDENT ENTREPRENEURSHIP	pag.	9
Editorial by Roberto Parente, Rosangela Feola		
RESEARCH ARTICLES		
Towards a theory-informed practice of entrepreneurship education for university students: the case of hc.Lab by Davide Hahn, Tommaso Minola, Ilaria Cascavilla, Silvia Ivaldi, Mario Salerno	pag.	16
An overview of students' entrepreneurial intention antecedents by Linda Gabbianelli, Angelo Bonfanti, Cristian R. Loza Adaui, Giorgio Mion	pag.	48
Investigating the role of family, personality traits and self-efficacy in shaping students' entrepreneurial intentions by Tahir Hussain, Nisar Ahmed Channa, Altaf Hussain Samo	pag.	78
Determinants and success factors of student entrepreneurship: evidence from the university of Padova by Silvia Rita Sedita, Silvia Blasi	pag.	98
Fostering student entrepreneurial skills in sshs. The case of "Impresa in aula" by Mara Cerquetti, Lorenzo Compagnucci, Angela Cossiri, Giacomo Gistri, Francesca Spigarelli	pag.	119
OTHER RESEARCH ARTICLES		
The adequate organizational, administrative and accounting structure in smes: burden and honor by Carla Morrone	pag.	141
Passion between consumption and entrepreneurship: an exploratory analysis of comic publishers' case studies by Giada Salvietti, Silvia Ranfagni	pag.	158
BOOK REVIEW		
REVIEW: I. Light and L. P. Dana, L. P., Entrepreneurs and Capitalism since Luther: Rediscovering the Moral Economy, Lexington Books, 2020. by Francesca Sgrò	pag.	181



Rivista Piccola Impresa/Small Business

n. 1, anno 2021





EDITORIAL

INTRODUCTION TO THE SPECIAL ISSUE

Roberto Parente University of Salerno rparente@unisa.it Rosangela Feola University of Salerno rfeola@unisa.it

Article info

Keywords: Entrepreneural University; Entrepreneurial Commitment; Technology Transfer; Youth Entrepreneurship

DOI: 10.14596/pisb.2875

Abstract

This Special Issue would represent a forum for scholar in the field to further accrue knowledge on student entrepreneurship and the five papers included in the issue are authored by scholars from around the globe on a different array of student's entrepreneurship timely topics. The relevance of entrepreneurship for local and national economic growth is globally recognized (OECD, 2019) and in more recent years entrepreneurship is becoming an increasingly attractive career option among young people and students (Bergmann *et al.*, 2018; Fayolle and Gailly, 2015; Sieger *et al.*, 2011; Fini *et al.*, 2016). The percentage of students who started a business is 25% or more in some Universities like MIT (Hsu *et al.*, 2007; Roberts and Eesley, 2009), Stanford Business School (Lazear, 2005), and Tsinghua (Eesley *et al.*, 2009); between 12 and 36% in the engineering faculties of Halmstad University in Sweden (Eriksson, 1996), and 42% of Chalmers University Business School also in Sweden (Lindholm *et al.*, 2010).

In this perspective, ventures created by students represent significant contributor to university entrepreneurship (Åstebro *et al.*, 2012; Hayter *et al.*, 2017; Wright *et al.*, 2017, Feola *et al.*, 2020).

Over the past decades, universities face an increasing pressure to go beyond their traditional role of new scientific knowledge production and explore the potential of technology transfer and economic valorization of their scientific achievements. Accordingly, academia has been expanding its role beyond research and education to become a driver of innovation in the economic system and assuming the characteristics of entrepreneurial university (Etzkowitz *et al.*, 2000). Based on the triple-helix model of university-industry-government relations (Etzkowitz and Leydesdorff, 1997), entrepreneurial university concept highlights the new role of universities in contributing to the economic and social development (Etzkowitz, 1993; Etzkowitz and Leydesdorff, 2000; Etzkowitz *et al.*, 2000).

To perform the new role, universities engage in technology transfer activities (Mowery and Shane, 2002) and devote significant attention and efforts to encourage academic entrepreneurship (Rothaermel *et al.*, 2007), a phenomenon that has been connected to processes of technological development and economic growth (Fini *et al.*, 2017).

However, in the context of entrepreneurial university, the focus of academic efforts has consistently been attached to scientific research, patenting and technological transfer activities (Abreu and Grinevich, 2013). On the other hand, studies on Entrepreneurship in University often focus only on senior and professional researchers and on academic spin-offs (Clarysse *et al.*, 2011; Fini *et al.*, 2011; Gulbrandsen and Smeby, 2005; Landry *et al.*, 2007). As a consequence, prior research has tended to not fully consider the role that student entrepreneurship could play (Grimaldi *et al.*, 2011; Marchand and Hermens, 2015) and the fact that their activity cannot be easily connected to the outcomes of scientific research and formal technology transfer activities might be responsible for the underestimation of the phenomena (Politis *et al.*, 2010).

Nevertheless, in the last years, Student Entrepreneurship as a field of research has attracted an increasing number of Scholars (e.g., Bergmann

et al., 2016; Shirokova et al., 2016; Beyhan and Findik, 2018; Wright et al., 2019), and several efforts have been put in place by organizations and Consortia to close that gap. An example is Guesss (http://www.guesssurvey.org) that has been carrying out an annual review on Student's Entrepreneurial Spirit since 2003.

This special issue would represent a forum for scholars in the field to further accrue new knowledge on student entrepreneurship and the five papers included in the issue are authored by scholars from around the globe on a different array of student's entrepreneurship timely topics.

The first manuscript, authored by Davide Hahn, Tommaso Minola, Ilaria Cascavilla, Silvia Ivaldi and Mario Salerno, explores Entrepreneurship Education focusing the attention on how entrepreneurship can be taught. Adopting a single case study methodology authors describe the peculiar characteristics of the Healthcare Contamination Lab (HC.LAB), a six months Entrepreneurship Education (EE) program offered by the University of Bergamo (Italy). The study provides some suggestions for the design of EE programs. More specifically the study suggests how conceptual foundations of entrepreneurship and innovative education principles, such as multi-disciplinary, social and experiential-based learning can be applied to the design of EE, thereby combining elements of pedagogy and andragogy.

The second article, authored by Linda Gabbianelli, Angelo Bonfanti, Cristian R. Loza Adaui and Giorgio Mion, investigates the specific topic of Student Entrepreneurial Intention (SEI). Adopting a research synthesis method of peer reviewed scholarly literature on Student Entrepreneurship and Entrepreneurial Intention, the paper provides a detailed analysis of the key factors of SEI through a review of 15 years of research on this topic. The paper identifies three sets of antecedents for SEI (personality trait-related factors, contextual/situational factors and personal background-related factors) and the main theoretical models employed by scholars to investigate factors influencing students' intentions to establish a new business.

The third paper, authored by Tahir Hussain, Nisar Ahmed Channa and Altaf Hussain Samo, investigates the role of family, personality traits and self-efficacy in shaping Students' Entrepreneurial Intentions. Using the theoretical framework of social cognitive theory, the paper considers a sample composed of 374 final year university students. The results of the study suggest a significant positive impact of family background and self-efficacy on entrepreneurial intentions. Further the findings of the study revealed the link of big five personality traits (consciousness, openness to experience, extroversion, agreeableness, and neuroticism) with EI of students.

The fourth paper, authored by Silvia Rita Sedita and Silvia Blasi, investigates the determinants of student entrepreneurship and of the success of entrepreneurial action. The study suggests that student Entrepreneurship is positively correlated with entrepreneurship education and it is depen-

dent on the university course attended by the student, with STEM courses producing more entrepreneurs. In terms of the determinants of a successful business, the study shows that success of a graduate's business is associated with a match between the field of activity of the company and the type of university course attended.

The fifth paper authored by Mara Cerquetti, Lorenzo Compagnucci, Angela Cossiri, Giacomo Gistri and Francesca Spigarelli, investigates the role of universities in stimulating students'entrepreneurial skills with a specific focus on Social Sciences and Humanities. The study analyzes the correlation between student participation in experiential learning activities and the development of soft skills, and provides practical recommendations for implementing entrepreneurship education in the field of social sciences and humanities. Research results suggest the need to promote a closer integration of learning-by-doing activities in university curricula and programmes in Social Sciences and Humanities.

We hope that the readers of this issue will found inspirations to start new research projects around this fascinating and very promising topic.

References

Abreu, M. and Grinevich, V. (2013), "The nature of academic entrepreneurship in the UK: widening the focus on entrepreneurial activities", *Research Policy*, Vol. 42 No. 2, pp. 408-422.

Astebro, T., Bazzazian, N., Braguinsky, S. (2012). "Startups by recent university graduates and their faculty: Implications for university entrepreneurship policy", *Research Policy*, 41(4).

Bergmann, H., Hundt, C., and Sternberg, R. (2016). What makes student entrepreneurs? On the relevance (and irrelevance) of the university and the regional context for student start-ups. *Small Business Economics*. doi:10.1007/s11187-016-9700-6.

Bergmann H., Geissler M., Hund C., and Grave B. (2018): "The climate for entrepreneurship at higher education institutions", *Research Policy*, 47.

Beyhan, B., and Findik D. (2018). Student and graduate entrepreneurship: ambidextrous universities create more nascent entrepreneurs. *The Journal of Technology Transfer*, 43 (5) (2018), pp. 1346-1374.

Clarysse, B., Tartari, V., Salter, A. (2011). "The impact of entrepreneurial capacity, experience and organizational support on academic entrepreneurship", Research Policy, 40 (8).

Eesley, C.E., Roberts, E.B., and Yang, D. (2009). "Entrepreneurial Ventures from Technology- Based Universities: A Cross National Comparison". Working Paper - Stanford University.

Eriksson, E.-L. (1996) Akademiskt fo retagande—fra n student till fo retagare, Licentiate thesis, SIRE/Lund. University, Halmstad University, Halmstad.

Etzkowitz, H. A., and Leydesdorff, L. (Eds.). (1997). *Universities and the Global Knowledge Economy: A Triple Helix of Academic-Industry-Government Relations*. London: Cassell Academic.

Etzkowitz, H. (1993). "Enterprises from Science: The origins of Science-based Regional Economic Development". *Minerva*, 31(3): 326-360.

Etzkowitz, H., Webster, A., Gebhardt, C. and Terra, B.R.C. (2000), "The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm", *Research Policy*, Vol. 29 No. 2, pp. 313-330.

Etzkowitz, H. A., and Leydesdorff, L. (2000). The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university–industry–government relations. *Research Policy*, 29(2), 109–123. doi:10.1016/S0048-7333(99)00055-4;

Fayolle, A. and Gailly, B. (2015), "The impact of entrepreneurship education on entrepreneurial attitudes and intention: hysteresis and persistence", *Journal of Small Business Management*, Vol. 53 No. 1, pp. 75-93.

Feola R., Cucino V., and Parente R. (2020), The entrepreneurial role of university: how to measure the entrepreneurial orientation of Academia, *Journal of the Knowledge Economy*. ISSN: 1868-7865 (print version), ISSN: 1868-7873. DOI: 10.1007/s13132-020-00675-9.

Fini, R., Fu, K., Mathisen, M., Rasmussen, E. and Wright, M. (2017), "Institutional determinants of university spin-off quantity and quality: a longitudinal, multilevel, cross-country study", *Small Business Economics*, Vol. 48 No. 2, pp. 361-391.

Fini R., Meoli A., Sobrero M., Ghiselli S., and Ferrante F. (2016), "Student Entrepreneurship: Demographics, Competences and Obstacles", *Almalaurea Consortium*, 2016. Technical Report.

Fini, R., Grimaldi, R., Santoni, and S., Sobrero, M. (2011). "Complements or Substitutes? the Role of Universities and Local Context in Supporting the Creation of Academic Spin-Offs," *Research Policy*, 40(8).

Grimaldi, R., Kenney, M., Siegel, D.S., and Wright, M. (2011). "30 years after Bayh–Dole: Reassessing academic entrepreneurship", *Research Policy*, 40(8).

Gulbrandsen, M., Smeby, J.C., (2005). Industry funding and university professors' research performance. *Research Policy* 34, 932–950.

Hayter, C.S., Lubynsky, R. and Maroulis, S. (2017), "Who is the academic entrepreneur? The role of graduate students in the development of university spinoffs", *The Journal of Technology Transfer*, Vol. 42 No. 6, pp. 1237-1254.

Hsu, D.H., Roberts, E.B., Eesley, C.E. (2007). "Entrepreneurs from technology-based universities: evidence from MIT", *Research Policy*, 36 (5).

Landry, R., Amara, S., Saihi, M. (2007). "Patenting and spin-off creation by Canadian researchers in engineering and life sciences", *The Journal of Technology Transfer*, 32 (3).

Lazear, E.P. (2005). "Entrepreneurship", Journal of Labor Economics, 23.

Lindholm Dahlstrand, Å., Berggren, E. (2010). "Linking innovation and entrepreneurship in higher education: a study of Swedish schools of entrepreneurship". In: R., Oakey, A., Groen, G., Cook, & P., Van der Sijde, (Eds.), *New Technology-Based Firms in the New Millennium*, vol. 8: 35–50. Emerald Group Publishing.

Marchand, J. and Hermens, A. (2015), "Student entrepreneurship: a research agenda", International Journal of Organizational Innovation, Vol. 8 No. 2, pp. 266-281.

Mowery, D.C. and Shane, S. (2002), "Introduction to the special issue on university entrepreneurship and technology transfer", Management Science, Vol. 48 No. 1, pp. 5-9.

OECD. (2019). Cultivating Successful Entrepreneurs. Available at: https://www.oecd.org/cfe/leed/entrepreneurship.htm

Politis, D., Winborg, J. and Dahlstrand, Å.L. (2010), "Exploring the resource logic of student entrepreneurs", *International Small Business Journal*, Vol. 30 No. 6, pp. 659-683.

Roberts, E. B., Eesley, C. (2009). "Entrepreneurial impact: The role of MIT", Ewing Marion Kauffman Foundation.

Rothaermel, F.T., Agung, S. and Jiang, L. (2007), "University entrepreneurship: a taxonomy of the literature", *Industrial and Corporate Change*, Vol. 16 No. 4, pp. 691-791.

Sieger, P., Fueglistaller, U., & Zellweger, T. (2011). Entrepreneurial Intentions and Activities of Students across the World. International Report of the GUESSS Project 2011. St. Gallen.

Shirokova, G., Osiyevskyy, O. and Bogatyreva, K. (2016), "Exploring the intention-behavior link in student entrepreneurship: moderating effects of individual and environmental characteristics", European Management Journal, Vol. 34 No. 4, pp. 386-399.

Wright, M., Siegel, D.S. and Mustar, P. (2017), "An emerging ecosystem for student start-ups", *The Journal of Technology Transfer*, Vol. 42 No. 4, pp. 909-922.

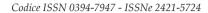
Wright, M., Mustar, P. and Siegel, D. (2019), Student Start-Ups: The New Landscape of Academic Entrepreneurship, World Scientific Books, doi: 10.1142/11494.





Rivista Piccola Impresa/Small Business

n. 1, anno 2021





TOWARDS A THEORY-INFORMED PRACTICE OF ENTREPRENEURSHIP EDUCATION FOR UNIVERSITY STUDENTS: THE CASE OF HC.LAB

Davide Hahn University of Bergamo davide.hahn@unibg.it Tommaso Minola University of Bergamo tommaso.minola@unibg.it

Ilaria Cascavilla University of Bergamo ilaria.cascavilla@unibg.it Silvia Ivaldi University of Bergamo silvia.ivaldi@unibg.it Mario Salerno University of Bergamo mario.salerno@guest.unibg.it

Article info

Date of receipt: 31/07/2020 Acceptance date: 31/03/2021

Keywords: Entrepreneurship Education; Student Entrepreneurship; Contamination Lab.

doi: 10.14596/pisb.2846

Abstract

Amongst the various formal and informal mechanisms through which a university fosters student entrepreneurship, entrepreneurship education (EE) occupies a central role in the academic debate and in university practice. Despite the growing amount of EE studies in the last years, some puzzles persist. More specifically, much remains to be unveiled on how entrepreneurship should actually be taught in the classroom. Scholars lament a knowledge gap between the teaching practices of EE and the theoretical development of both the entrepreneurship and the general education fields. To contribute to this debate, this study describes the characteristics and outcomes of the Healthcare Contamination Lab (HC.LAB), a six-month EE program. *In particular, the authors describe a possible way to inform* the design of EE with the theoretical foundations of entrepreneurship and with innovative education principles, using HC.LAB as a revelatory single case study. More specifically, for five dimensions of EE design, the authors outline the originality of the HC.LAB journey and offer some very preliminary evidence on the results of the first edition of HC.LAB.

Funding

This research received the Contamination Lab's project funding by the Italian Ministry of Universities and Research (MIUR) – Programma Nazionale per la Ricerca 2015-2020 - Directorial Decree no. 3158 of 29 November 2016 n.3158.

1. Introduction

The phenomenon of student entrepreneurship, which indicates those entrepreneurial endeavours undertaken by university students and recent graduates (Bergmann et al., 2016; Colombo and Piva, 2020), represents a key mechanism through which knowledge created at the university is exploited by new businesses (Wennberg et al., 2011) and contributes to the economy (Åstebro et al., 2012). As a result, in recent years, student entrepreneurship has attracted increasing attention by policy-makers because it represents an additional channel through which knowledge created within universities can be commercialized, besides the more traditional technology transfer mechanisms such as academic entrepreneurship or licensing (Audretsch et al., 2020; Sansone et al., 2019; Shah and Pahnke, 2014). Therefore, it is not surprising that efforts to create university ecosystems supporting students' entrepreneurial activities have been increasing (Wright et al., 2017). This shift is reflected in the academic debate on university entrepreneurship. The focus on entrepreneurial activities undertaken by researchers and faculty (e.g., Feola et al., 2019; Hahn et al., 2019) now goes hand in hand with increased attention on the processes and outcomes of students' entrepreneurial behaviours and attitudes (Hahn, 2020; Parente et al., 2019; Castellano et al., 2014).

In particular, amongst the various formal and informal mechanisms through which a university fosters student entrepreneurship (e.g., socialization with peers, Kacperczyk, 2013; university climate and culture, Hahn, 2020; Bergmann et al., 2018; and role modelling from mentors, Meoli et al., 2020), entrepreneurship education (EE) occupies a central role in the academic debate and in university practice (Hahn et al., 2020; Nabi et al., 2017). EE offers awareness about the entrepreneurship phenomenon (i.e. education about entrepreneurship) and/or actual entrepreneurial knowledge (i.e. education for entrepreneurship), defined as the knowledge required to identify and exploit new business opportunities (Politis, 2005). Despite the growing amount of EE studies in the last years, some puzzles persist (Nabi et al., 2017). More specifically, it remains to be understood how entrepreneurship can be actually taught in the classroom (Neck and Greene, 2011). Even more importantly, since the EE comes in many different forms, in terms of audience, objectives, content and method pedagogies (Naia et al., 2014), research can help educators and practitioners to identify the most suitable EE practices for a specific target (Hahn et al., 2020; Hahn et al., 2017). To do so, scholars should take advantage of stronger intellectual and conceptual foundations and allow EE to profit more from the development of the entrepreneurship and general education fields (Hägg and Kurczewska, 2019; Fayolle, 2013). Put differently, informing the practice of EE with theoretical foundations of entrepreneurship innovative education

principles represents a valuable opportunity to move a step forward in the design and assessment of entrepreneurship courses.

In order to contribute to such aim, in this paper we adopt a single case study methodology to describe in depth the peculiar characteristics of the Healthcare Contamination Lab (HC.LAB), a six-month EE program offered by the University of Bergamo (Italy). HC.LAB is a specific implementation of the Contamination Labs (CLabs) initiative, which has been recently under investigation in academic journals (e.g., Secundo et al., 2021; Secundo et al., 2020a; Secundo et al., 2020b; Secundo et al., 2020c; Fiore et al., 2019). We focus on HC.LAB because it represents an illustrative case of how conceptual foundations of entrepreneurship and innovative education principles, such as multi-disciplinary, social- and experiential-based learning (OECD, 2017), can be applied to the design of EE. In particular, the theoretical foundation of the program is based on the concept of opportunity. Entrepreneurship is the process of identifying and acting upon entrepreneurial opportunities (Shane and Venkataraman, 2000). Entrepreneurial opportunities are much more than an idea such as an invention or the spotting of an unmet market need. Developing opportunities consists of matching a specific need with those means and resources that offer a marketable solution to that need (Ardichvili et al., 2003). Opportunity development not only requires domain-specific knowledge (Shane, 2000) but also the ability to "connect the dots" and see that knowledge from different angles (Baron, 2006). Reproducing such conditions in the classroom is challenging for traditional curricular EE courses because they often stay too general without focusing on specific industries or classes of businesses (Laukkanen, 2000). Moreover, they are generally attended by homogeneous classes - composed of students of the same age, level, and field of study – or they are taught by a single professor (Fiore et al., 2019). These factors might limit the contamination¹ among different views of the world. The HC.LAB program aims at overcoming some of such limitations. It does so by focusing on a specific industry – the healthcare sector – and encouraging the *contamination* between different views.

With this case study, we aim at contributing to the debate on EE by showing how entrepreneurship theoretical foundations and advancements in general education can inform the design and implementation of entrepreneurship programs. To do so, we conceptualize the originality of HC.LAB along different key dimensions and also provide preliminary empirical evidence, through a pre-test and post-test survey, about the actual outcomes reported by students attending the program. Overall, the find-

¹The word "contamination" should be read here, and in the rest of the paper, in a positive sense and not related to epidemiological contexts; please read contamination as a synonym of "exchange of knowledge and views" or "cross-fertilization"

ings contribute to the understanding of the mechanisms through which universities can foster student entrepreneurship, leveraging on education programs.

2. Literature review

2.1 Entrepreneurship education and student entrepreneurship

Student entrepreneurship has increasingly attracted the interest of scholars and policymakers (Wright et al., 2017; Lackéus, 2015) because students' ventures facilitate knowledge spillovers that draw on the entrepreneurial and technological knowledge provided at a university (Minola et al., 2016; Shah and Pahnke, 2014; Åstebro et al., 2012; Wennberg et al., 2011). More in general, students, endowed with an entrepreneurial mindset (Secundo et al., 2020a), who are able "to turn ideas into action" and "to be more creative and self-confident in whatever they undertake", European Commission (2008:7), are better equipped for the current labour market (UNDESA, 2020; Audretsch, 2014; Urbano and Guerrero, 2013). In order to prepare students to perform the variety of tasks required to identify and act upon new business opportunities (Karlsson and Moberg, 2013; McGee et al., 2009), EE has become ubiquitous in universities worldwide, in different disciplinary areas and fields of studies (Fiore et al., 2019; Mustar, 2009; Souitaris et al., 2007). Besides encouraging students to create new ventures (Eesley and Lee, 2021), EE builds on the assumptions that students will take advantage of the acquired entrepreneurial skills even if they eventually decide to work as employees (Davey et al., 2018; Leitch et al., 2012; Mustar, 2009). Moreover, entrepreneurial and interpersonal skills students can acquire through EE belong to the set of competencies that the European Commission considers needed for personal fulfilment and employability (EPC, 2018).

In response to the centrality of EE in the political agenda, in the last decades we have witnessed a growing heterogeneity in EE offerings and in recommendations to design EE curricula (Fayolle, 2013; Pittaway and Cope, 2007). Research on EE has widely recognized that appreciating such heterogeneity is of paramount importance to understand how an EE program should be designed (Hahn et al., 2017; Karimi et al., 2016; Fayolle and Gailly, 2015). In fact, the impact reported by EE studies varies considerably (Naia et al., 2014), with studies showing positive (Karlsson and Moberg 2013; DeTienne and Chandler, 2004), mixed (Volery et al., 2013; von Graevenitz et al., 2010), statistically non-significant (Oosterbeek et al., 2010; Souitaris et al., 2007), or even negative (Chang and Rieple, 2013) effects on EE and students' entrepreneurial skills. The conflicting results of

this research urge scholars to identify the most suitable EE practices for a specific target (Hahn et al., 2020; Lyons and Zhang, 2018; Hahn et al. 2017). To do so, they have started to conceptualize and take into account the main dimensions that describe EE teaching models as key boundary conditions of the EE – impact relationship (Nabi et al., 2017).

2.2 Entrepreneurship education teaching models

In the literature, the teaching model of EE programs is generally described through 5 dimensions (Naia et al., 2014; Fayolle, 2013): (1) For whom? The audience of the program; (2) Why? The objectives of the program; (3) What? The contents of the program; (4) How? The teaching methods of the program; and (5) For which results? The evaluation of the outcomes of the program. Research has shown that these dimensions greatly matter in determining the actual impact of entrepreneurship courses (Nabi et al., 2017).

First, the audience of EE programs varies considerably among different dimensions. These include, for example, their study background. Since EE is becoming diffused throughout campuses, students at any level and of all fields of study are now increasingly exposed to EE (Shinnar et al., 2009). Additionally, an EE course can be offered to multidisciplinary classes (Fiore et al., 2019). EE can also be offered as an elective or compulsory (Hahn et al., 2020). Also, the audience of EE courses can vary based on their prior exposure to entrepreneurship (Peterman and Kennedy, 2003). It is worth mentioning that the target of EE may include actual or even prospective entrepreneurs (Lyons and Zhang, 2018). Overall, research indicates that the audience will affect the impact of EE offerings. For example, students in elective EE courses are usually more motivated to learn entrepreneurship, which makes it easier to observe positive outcomes of EE (Hahn et al., 2020; Karimi et al., 2016; Rauch and Hulsink, 2015). Moreover, pre-existing exposure to entrepreneurship, such as start-up experience or an enterprising family background, helps students to connect EE to the actual practice of entrepreneurship, thereby they learn more effectively (Hahn et al., 2020; Hahn et al., 2017).

Second, EE courses differ in terms of objectives. In general, we can distinguish between 'Education about Entrepreneurship' and 'Education for Entrepreneurship' paradigms (Haase and Lautenschläger, 2011). In the former case, the main goal is to provide students with a fundamental understanding of entrepreneurship as a phenomenon. In the latter case, the aim is to endow students with knowledge, skills, and motivation to identify and act upon opportunities.

Third, the objectives of EE are directly connected with the content taught in entrepreneurship programs. While theoretical approaches towards the study of entrepreneurship (e.g., definitional issues, the conceptualization of opportunity, effectuation, bricolage) dominate the 'Education about Entrepreneurship' paradigm, courses based on 'Education for Entrepreneurship' concept convey a mix of hard facts about business creation and management (e.g., business planning and financing), soft skills (e.g., creativity, leadership, teamwork), and motivation (e.g., inspiration to undertake entrepreneurship).

Fourth, the methods adopted in EE are numerous and heterogeneous (e.g., conventional lectures, workshops, focus groups, keynote speeches, games, simulations, business planning) and should be connected to the desired educational impact (Nabi et al., 2017). Recently, scholars have suggested that EE should combine teaching methods from both pedagogy and andragogy paradigms, because of the cognitive development phase of its participants: they are emergent adults who are moving away from the typical structured schooling approaches to become gradually more responsible for their learning process (Hägg and Kurczewska, 2019). While pedagogy is based on teachers imparting knowledge and leading the learning environment, andragogy approaches are learner-centric, requiring learners to take full responsibility for their learning processes (McNally et al., 2020). In the EE context, pedagogy is typically characterized by frontal lectures that provide knowledge about theory and hard facts about entrepreneurship concepts and fundamentals. Instead, andragogy embraces practical-oriented methods through which students can get motivation and soft skills by directly experiencing entrepreneurship (Haase and Lautenschläger, 2011; Neck and Greene, 2011) and reflecting on their experiences (Gielnik et al., 2015; Béchard and Grégoire, 2005).

In discussing the duality between andragogy and pedagogy models, scholars have recently moved away from an a-critical praising of purely experiential-based methods and have acknowledged the existence of a pedagogy-andragogy continuum which combines elements of both (Hägg and Kurczewska, 2019). Even though 'practice-oriented' rather than 'theoretical-oriented' methods are more suitable to develop students' entrepreneurial skills (Hahn et al., 2017; Piperopoulos and Dimov, 2015), pedagogy can help learners to mature and be more prepared and motivated to profit from the experiential-based method (Hägg and Kurczewska, 2019). For example, theoretical knowledge about entrepreneurship concepts and tools can encourage and help students to reflect and learn from their experiences during business simulations and labs.

Finally, the assessment of EE impact can relate to different dimensions, ranging from satisfaction from the course to entrepreneurial learning, intention, or actual behaviour (Souitaris et al., 2007; Fayolle and Gailly, 2015). In evaluating the effect of entrepreneurship courses, it is important to connect the outcomes under assessment to the course objectives. For example, even though the entrepreneurial intentions construct is widely adopted as

a proxy for EE effectiveness (Bae et al., 2014; Martin et al., 2013), it does not necessarily mean that EE does not work if it does not convince students to become entrepreneurs. In some cases, EE may raise students' awareness about the challenges connected to an entrepreneurial career, thereby discouraging those who do not feel prepared for it (Eesley and Lee, 2021; von Graevenitz et al., 2010). Additionally, learning benefits from EE do not always lead to entrepreneurial intentions (Volery et al., 2013; Souitaris et al., 2007). Therefore, even though students become more confident in their entrepreneurial skills, they do not necessarily want to exploit them in an entrepreneurial career path. This does not represent an undesirable outcome. It also worth mentioning that there are cases in which the diminished perception of entrepreneurial skills could paradoxically represent a desirable outcome of EE because it might be connected to a more critical selfassessment of one's own competences and to the realization that more has to be learned (Eesley and Lee, 2021; Hahn et al., 2017). On the other hand, if we assess entrepreneurship programs specifically designed for enabling aspiring entrepreneurs to implement their business ideas, then looking at the resulting entrepreneurial activities produced by EE is very appropriate (Lyons and Zhang, 2018).

In sum, the design and reciprocal fit of the five dimensions discussed above are crucial in determining the success of entrepreneurship programs. To date, however, scholars lament a knowledge gap between the teaching practices of EE and the scholarly knowledge about entrepreneurship derived from academic research (Fayolle, 2013). EE could also profit more from the development of the general education field. In the following sections, we describe a possible way to inform the design of EE with the theoretical foundations of entrepreneurship, using HC.LAB as a revelatory case study. More specifically, for each of the five dimensions discussed above, we outline the originality of the HC.LAB journey and offer some very preliminary evidence on the results of the first edition of HC.LAB.

3. Methodology

3.1 Research design

This research focuses on the EE program HC.LAB by using a revelatory single case study methodology (Yin, 2009) based on observations, semi-structured in-depth interviews with key informants, and a survey. Recently, case study methodology has been fruitfully adopted to advance the literature on EE by studying the Italian Contamination Labs network (e.g., Secundo et al., 2021). In EE research, single case study methodologies are particularly suited to study in depth the uniqueness of EE programs

(Fiore et al., 2019; Shih and Huang, 2017; Blenker et al., 2014). By focusing on HC.LAB as a revelatory case study, we aim to offer an in-depth understanding of its unique merits and challenges which, although not generalizable, may also have implications transferrable to the design of other programs (Shenton, 2004).

3.2 Research context

The HC.LAB program belongs to the Italian network of Contamination Labs ("CLabs") joined by 23 partner universities. CLabs are financed by the Italian Ministry of Education, University and Research (MIUR) with the aim of equipping students with the skills required for the development of entrepreneurial opportunities (Secundo et al., 2020a). CLabs are virtual and physical spaces that enable the interaction and dialogue among individuals with different disciplinary backgrounds and among university students and other people aiming at becoming more entrepreneurial, thereby fostering the "contamination" between multiple perspectives and disciplinary backgrounds. CLabs take advantage of close links with the local business community and stakeholders, thereby exploiting the strengths of the local ecosystem. For example, HC.LAB, which is the CLab organized by the University of Bergamo, leverages the well-developed healthcare sector in the region. Due to their originality, CLab initiatives have been recently studied in EE research (Secundo et al., 2020a; Secundo et al., 2020b; Secundo et al., 2020c; Fiore et al., 2019).

The present article refers to the 2018-19 edition of HC.LAB; the program was composed of 15 lessons of 4 hours each for a total of 60 hours. The program was divided in two main modules. Before the start of the program, a roadshow promoted the program in university departments and local high schools. During the roadshow, a mix of online channels (e.g., social networks, e-mail invitations, etc.) and in-class presentation of the course served to illustrate the key features of the program and the key benefits that individuals would achieve by joining the program. By doing so, the objective was to attract the interest of highly motivated students from a variety of backgrounds and ages.

The program was attended by 37 students, with 32 participants completing it successfully. The initial class was composed of 22 males and 15 females. Students' ages ranged from 17 to 31 years, with an average of 22 years. In particular, only 5 participants were more than 25 years old, 11 were less than 20 years old, and 22 were aged between 20 and 25 years. Concerning their level of study, 14 were high school students, 11 were bachelor students, 11 were master students, and 1 was a PhD candidate (ongoing). Finally, 7 students came from social sciences, 3 from economics,

7 from management engineering, 5 from computer science or mechanical engineering, and 15 had a natural sciences background.

In the first module – lasting from December 2018 to February 2019 – students were taught about the fundamentals of entrepreneurship by the main professor and other lecturers. In addition, invited speakers occupying different roles in the healthcare sector offered to students some knowledge about this industry. This mix of lectures and keynote speeches helped participants to understand the actual needs of the healthcare industry, which represents the first step for the development of entrepreneurial ideas. Only at later stages of the program students had to come up with potential solutions for those needs. Finally, students were given some opportunities for contamination and cross-fertilization. They had the possibility to work on small tasks in provisional teams to get to know each other better. At end of the first module, each student was individually asked to formulate at least three needs in the healthcare industry. The assignment pushed students to apply and reflect on what they had learned about the identification of needs in a specific industry. To sum up, the first module was built on the main pillars of HC.LAB: (i) contamination (through teamwork and the exposure to a multidisciplinary faculty); (ii) healthcare sector (by inviting experts of the sector); and (iii) the goal of generating entrepreneurial opportunities (by teaching the fundamentals of entrepreneurship and asking students to come up with ideas). More details about the Module can be found in Table 1.

Tab. 1: Structure of HC.LAB

Lesson	Content	Speakers		
Module :	Module 1			
1: 1st part	Lecture: Introduction to the course. Entrepreneurship and Healthcare	Tommaso Minola: professor of entrepreneurship and strategy at the University of Bergamo and director of the entrepreneurship and family business research Center CYFE (Center for Young and Family Enterprise) Mario Salerno: CYFE fellow and Project Manager of HC.LAB; experience in supporting start-ups.		
1: 2nd part	Lecture: Entrepreneurship as career opportunity	Silvia Ivaldi: scholar and professor in the Department of Human and Social Sciences at the University of Bergamo; specialized in work and organizational psychology; consultant for profit and non-profit organizations		
2: 1st part	Lecture: Health, habits and social impact	Stefano Tomelleri: professor and scholar in the Department of Human and Social Sciences at the University of Bergamo; specialized in social dynamics of collective phenomena		
2: 2nd part	Lecture: Business models and management of health	Luca Foresti: CEO of a Medical Center since 2010; previous experience as employee and founder in the fintech sector.		

3: 1st part	Lecture: Idea generation	Daniele Radici: lecturer of entrepreneurship at the University of Bergamo and founder of Innovation Lab; consultant on creativity and innovation processes.
3: 2nd part	Lab: Idea generation - exercise in provisional teams	Francesco Magni: researcher at the University of Bergamo on pedagogies, formation of teachers, school systems and entrepreneurship education
4: 1st part	Keynote: Founder of "Quickly Pro" Lecture: Healthcare and digitalization Keynote: Healthcare initia- tives at the University of Bergamo	Niccolò Sala: medical doctor and co-founder of the healthcare start-up Quickly Pro. Roberto Ascione: CEO of Healthware, a leading consulting company for digital health. Caterina Rizzi: scholar, professor and director of the department of Management, Information and Production Engineering at the University of Bergamo; she leads the research group V&K (Virtualisation & Knowledge) which develops ICT technologies supporting industrial applications.
4: 2nd part	Keynote: Technologies for improving well-being of individuals	Franco Molteni: medical doctor specialized in rehabilitation; he works as Division Director in the hospital, as consultant and as research coordinator for non-profit organization
5: 1st part	Keynote: From a prototype to a marketable product. The experiences from incu- bators (e-Novia) and start- ups (Holey)	Cristiano Spelta: co-founder of e-Novia, a consulting company which helps entrepreneurs to turn ideas borne in university research labs into businesses. Gabriel Scozzarro: entrepreneur and inventor at Holey, a start-up which uses 3D printing to produce medical devices.
5 2nd part	Keynote: Investing in the healthcare sector	Alessio Beverina: co-founder and Managing Partner at Panakes Partners, venture capital specializing in the healthcare sector.
6: 1st part	Lecture: Business Model Canvas	Daniele Radici; Fabio Donadoni: innovation consultant at Innovation Lab; specialized in strategic and project management, teamwork, and business planning.
6: 2nd part	Lab: Business Model Canvas - exercise in provisional teams	Fabio Donadoni; Silvia Ivaldi
7: 1st part	Lab: Team formation and wrap-up	Mario Salerno; Andrea Potestio: scholar and professor in the Department of Human and Social Sciences at the University of Bergamo; specialized in the study of pedagogies and teaching; coordinates students' job internships for his department
7: 2nd part	Lab: Preparation to the outdoor trip	Stefano Tomelleri
9: 1st part	Lecture: Analysis of the market need; data sources	Daniele Radici
9: 2nd part	Lab: Teamwork with tutors	
10: 1st part	Lecture: Opportunity evaluation	Roberto Lusardi: scholar and professor in the Department of Human and Social Sciences at the University of Bergamo
10: 2nd part	Lab: Teamwork with tutors	

11: 1st part	Lecture: Market analysis	Marco Daz: lecturer of entrepreneurship and marketing at the Engineering Department at the University of Bergamo
11: 2nd part	Lab: Teamwork with tutors	
12: 1st part	Lecture: Revising the Business Model Canvas	Daniele Radici
12: 2nd part	Lab: Teamwork with tutors	
13: 1st part	Lecture: How to present a business project	Mario Salerno; Silvia Ivaldi
13: 2nd part	Lab: Teamwork with tutors	
14	Final event 1: Presentation and evaluation of the projects to the class and the faculty	
15	Final event 2: Presentation and evaluation of the projects to a mixed audience of students, faculty and industry experts	

Source: Authors' elaboration

The second module started after the team formation, and it was aimed at enabling students to develop further the entrepreneurial opportunity from their idea of needs. The module ended with the pitch of students' business models to an audience composed of faculty and industry experts. During the module, students worked in teams built around a specific need, and they collaborated in order to come up with a possible solution for it. To simulate a real team-building process, teams were formed through a process of negotiation among participants. First, the professor formed 6 clusters based on the similarity of the needs identified by students on an individual basis. Second, the professor shared with students all of these clusters and allowed everybody to see the ideas generated by their colleagues (often with different backgrounds). At this point, based on the socialization with other participants and the personal preferences concerning the ideas to develop, participants formed the teams. Just as it happens when real entrepreneurial teams are formed (Preller et al., 2020), the ideas generated by the individuals can precede and influence the selection of partners. In contrast to other EE initiatives, where teams are formed ex-ante before the idea generation, the program is built in a way to ensure that ideas are generated on an individual basis and that the team formation follows this process. By doing so, the faculty also facilitate the spontaneous formation

of heterogeneous teams. In fact, participants have the opportunity to see and appreciate ideas generated by individuals with different backgrounds, which stimulated curiosity to collaborate with them. To further encourage the formation of multidisciplinary teams, participants were informed by the advantages enjoyed by teams with a broad range of competences, especially in healthcare (Garbuio et al., 2019). As shown in Table 2, the 8 teams formed benefited from a broad range of competences.

Tab. 2: Teams and Projects

Business Project	Need and Solution	Team
Apparecchio	IT platform that improves the efficiency of school canteens and encourages healthy food choices	University students in tourism, clinical psychology, engineering, humanities
BGenome	An integrated database that facilitates the collection, integration and management of genetic data	High school and university students in computer science engineering, bioinformatics
Ecate	A device that helps individuals to orient themselves in hospitals	High school and university students in healthcare engineering, foreign languages, and literature
HealthVox	Podcast platform for healthcare professionals	High school, university and doctoral students in computer science engineering, psychology, and economics
HigeyAPP	Digital platform for home health care	High school and university students in healthcare engineering
Remi	Smart pill organizer to remind patients or care givers when pills should be taken	High school and university students in management engineering, me- chanical engineering, and philoso- phy
Superich	Smartphone application that of- fers a set of services to take care of Alzheimer patients	High school and university students in healthcare engineering and clinical psychology
Vicino a te	Online platform that collects, integrates and elaborates data by facilitating communication and sharing of experiences among cancer patients and care givers	High school and university students in healthcare engineering and mechanical engineering

Source: Authors' elaboration

In order to give students an opportunity to build up a strong cohesion within the multidisciplinary teams in the program, at the start of the second module an outdoor trip was organized to a wine-maker in the region. The teams spent an intense day together by working on an unexpected entrepreneurial task which is unrelated to their ideas and to the sectorial focus of the course. After receiving a set of different types of wine bottles, the teams were asked to combine them creatively to create their own type

of wine, to find a name for their wine, and to build a value proposition in order to commercialize the wine. During this task, they familiarized themselves with some key challenges including, among others: Who are the target customers? What price would be charged for the wine? What is the uniqueness of the wine? The goal of this exercise was to strengthen the collaboration between team members and prepare them to face unexpected challenges.

After the team-building day, in the course of the second module, participants were offered a set of lessons providing them with the tools to develop the business models. Each lesson consisted of a frontal lecture followed by a lab in which teams, with the support of the instructor, applied the tools learned in the lecture to their ideas. This combination of frontal lectures and practice allowed students to reflect and practically experiment with what they learned on their real case. The module concluded with a pitch of the business models developed by the teams. Teams presented the results of their work first in front of the faculty and subsequently in a special closing event in front of the representatives of the local healthcare sector as well as potential investors, university students, and faculty. Before this event, students received some tips from the faculty to help them develop their presentation skills. The program represents a first step in the journey that leads to student entrepreneurship for those attendants wishing to further develop their business opportunity, turn it into a business plan, and eventually into a venture. The faculty encourages HC.LAB attendants to participate to the StartCup Summer School. This is a subsequent EE intensive program that helps nascent entrepreneurs to develop a business plan for a business plan competition. Details of the second module can be found in Table 1.

3.3 Data collection and analysis

The data collection was based on multiple methods: archival research, observation of participants, interviews with key informants, and a survey (cf. Secundo et al., 2021). By collecting information from both primary and secondary sources and triangulating qualitative and quantitative data, we were able to reduce the risks of biased interpretations and improve the construct validity of the case (Yin, 2009). Moreover, the accessibility to the researchers of the data archived in shared folders contributes to the reliability of case data (Yin, 2009).

First, we analysed the official documents describing the programs as well as the material used by the instructor during the course. These included, among others, the CVs of the participants and of the instructors, the syllabus, the supporting material for the lectures, the final presentations made by the teams, the results of the intermediate assignments, and the

final report written by the managers of the course. Second, we interviewed the teaching coordinator of HC.LAB who described in depth the structure of the program and the rationales behind its design. Third, the direct involvement of two of we in the program facilitated the analysis of the program and allowed us to obtain further insights about students' learning experiences. Finally, we collected data about students' learning outcomes, perceptions, and changes in their entrepreneurial intentions and attitudes through pre- and post-surveys. More specifically, we administrated a questionnaire at the start of the program and at the end. In the first one, we asked students about their prior exposure towards entrepreneurship and about their self-assessed predisposition towards entrepreneurship in terms of skills, motivation and career aspirations. In the final questionnaire, we asked the students to re-assess their predisposition towards entrepreneurship in order to verify the effects of the course. We also asked the students to evaluate their satisfaction with the course and their perceived learning outcomes. The questions of the survey were based on a validated in scale in EE literature (e.g., Zellweger et al., 2011; Liñán and Chen, 2009; Souitaris et al., 2007). Open questions about their overall experience and the challenges faced during the program allowed us to gain further insights about the students' entrepreneurial learning journey.

To analyse the collected data, we grounded the preliminary empirical analysis on existing scholarly work through a series of iterations between the literature and the information obtained from the various sources described above (Eisenhardt, 1989). By doing so, we were able to take advantage of the theory and conceptual advancements of extant research and ensure the internal validity (Yin, 2009) of this research, as described in the findings and discussion sections. Generalization of this research is limited because we adopted a single-case methodology and to address concerns about external validity, the authors will thus proceed with caution in proposing how lessons learned from the case study could be applied to other contexts (Shih and Huang, 2017).

4. Findings

4.1 Audience of HC.LAB

We know from entrepreneurship literature that in dynamic environments (e.g., such the healthcare sector) heterogeneous teams typically offer a competitive advantage to start-ups, provided that team members are able to manage conflicts and effectively share different perspectives with each other (Klotz et al., 2014). Teams having access to diversified knowledge are also facilitated in the development of potential opportunities into marketable solutions (Hahn et al., 2019; Knockaert et al., 2011). Finally, teams work better if they are kept close by the sharing of common goals and visions (Preller et al., 2020; Aldrich and Ruef, 2006).

In the specific context of EE, teams with heterogeneous cognitive skills perform better in the development of new venture ideas (Huber et al., 2020). In general, recommendations for innovative learning environments (OECD, 2017) endorse the connection across different areas of knowledge through socialization and interaction.

Based on such theoretical premises, the contamination among different perspectives within close and heterogeneous teams is one of the central elements of the originality of HC.LAB. In this respect, a proper selection of the audience of the program plays a fundamental role. In particular, three main actions were undertaken to achieve such an objective.

First, the program is promoted in different disciplinary areas of the university and in high schools. By doing so, heterogeneous participants get interested in the program. In fact, the final class was composed of university students and high school students and the ages ranged from 17 years to 31 years. Among university students, there were bachelor and master students as well as researchers or ex-alumni. Participants had backgrounds in engineering, social sciences, business, and law study areas. Such a class composition allows contamination among different perspectives to take place.

Second, the organizers of the program made sure to have highly motivated participants who were willing to socialize, collaborate, and connect with other subjects. The commitment to the program and the intrinsic motivation to learn and challenge oneself are key prerequisites for the sharing of ideas and perspectives. Therefore, the program is elective and not compulsory. Moreover, of all the applicants (more than 50), only 37 participants were accepted based on their motivation letters and interviews with the faculty. Despite their different backgrounds, study levels, and ages, the attendants shared the motivation to grow their personal soft skills in terms of creativity and teamwork.

Finally, the outdoor trip strengthens the cohesion and the effective col-

laboration within teams, while the team formation process based on negotiation builds up teams kept close by the sharing of common goals (i.e. the needs to be addressed).

4.2 Objectives of HC.LAB

The conceptualization of opportunity development (Ardichvili et al., 2003) and its antecedents (McMullen and Shepherd, 2006) inform the objectives of the program.

First, the program is focused on idea generation and opportunity development, which is the starting phase of the entrepreneurial process. In contrast to other programs that provide general knowledge for the entire entrepreneurial process – from spotting an opportunity until creating a venture – HC.LAB has a narrower scope. The course has traded the breadth of the objective for more depth in learning about how to identify and develop an entrepreneurial opportunity. Without good opportunities, no successful business can be created and managed. It is the identification and development of opportunities which makes EE unique with respect to management and business education (DeTienne and Chandler, 2004). Because of the course objective, as final output and deliverable, the faculty asked students to present a business model describing the entrepreneurial opportunity (e.g., market need, solution, customers, revenue model) rather than a business plan for a potential new venture (Honig, 2004).

Second, to strengthen the quality of the opportunities developed by students, the faculty adopted a sectorial focus which enables students to obtain in-depth knowledge of a specific industry and its needs. In contrast to programs with a general focus that provides non-specific knowledge about business and opportunities, the faculty employed a more contextualized approach, which allows students to take advantage of the so-called "knowledge corridors" that permit entrepreneurs to come up with unique opportunities (McMullen and Shepherd, 2006). This approach is in line with recent developments in the education field which encourage the connection between learners and the external world (OECD, 2017).

At the individual level, while students work in the laboratory to generate new ideas, they have the opportunity to empower their soft skills. For example, interpersonal skills and creativity were greatly tested and trained in the course of the program. The program is not meant to necessarily create new entrepreneurs, but it is aimed at forming more entrepreneurial individuals. The skills students learn during the journey can be used not only to develop the entrepreneurial opportunity into an actual business but also for whatever career students eventually decide to undertake: creativity, proactivity, and interpersonal skills are also crucial for employees and consultants of all sectors.

4.3 Contents of HC.LAB

The knowledge spillover theory of entrepreneurship conceptualizes student entrepreneurship as a mechanism to commercialize knowledge generated at a university (Audretsch, 2014; Wennberg et al., 2011). More specifically, the knowledge required to do so is of two types (Shah and Pahnke, 2014), technological and entrepreneurial knowledge. The former relates to knowledge about technological opportunities, while the latter is associated with understanding the processes through which those opportunities can be exploited.

Both dimensions of knowledge are present in the contents taught during the 15 lessons (see Table 1). More specifically, the content of the course combines specific knowledge about the healthcare sector with the tools for idea generation and opportunity development. By knowing a specific sector in depth, students have the possibility of practically applying the tools taught in class to a focused and well-defined area of expertise. This differs with respect to many venture creation programs in which students are taught these tools but lack the in-depth knowledge of a specific market or industry on which these tools can be applied. To further support students in the achievement of the course objectives, the program also teaches some fundamentals of the entrepreneurship phenomenon as a preparatory phase (Lesson 1). In fact, most students had never received a course in entrepreneurship before attending HC.LAB. Therefore, they needed to be introduced to the phenomenon before undertaking the core course activities. The program had also some space dedicated to skills such as presentation (Lesson 13) or teamwork (Lessons 7 and 8).

By imparting fundamental knowledge about entrepreneurship and healthcare, the program prepares students to reflect and learn from the practice-oriented activities of HC.LAB, which require them to develop a business idea in the healthcare sectors. Combining tools of idea generation, testing, and evaluation with in-depth knowledge about the healthcare sectors motivate and enable students to fully take advantage of the experiences made during the business project. The program thus embraces elements of pedagogy (i.e. imparting knowledge) in order to promote the maturation of the participants into learners capable to govern their learning process, as required by andragogy (i.e. implemented through practice-oriented approaches) (Hägg and Kurczewska, 2019).

4.4 Methods of HC.LAB

Entrepreneurship research emphasizes the importance of experience and socialization in entrepreneurs' learning processes (Cope, 2005), consistent with developments in general education (OECD, 2017). Experien-

ce allows potential entrepreneurs to test and revise their assumptions and beliefs in the actual business context. Also, it allows them to gain actual knowledge about the needs of the society. Socialization with co-founders or stakeholders is crucial to challenge and revise ideas, and it might also represent a source of support and motivation during the entrepreneurial journey. These elements are reflected in the variety of teaching methods employed during the program.

First, exposure to the healthcare sector is achieved by inviting keynote speakers from the healthcare sector who share their experience as entrepreneurs, professionals, or investors. By doing so, students not only gain knowledge about the industry, its functioning, and needs, but they also get a sort of inspiration which further motivates them to contribute to the sector and to learn appropriate skills for this promising industry.

Second, socialization among participants is encouraged through a combination of different methods. Besides the teamwork inside and outside the classroom, the creation of a Facebook group further encourages the dialogue among students and between students and faculty. A method of great novelty, which prompts contamination and cross-fertilization, is the sharing of the three needs identified by each individual participant with all the class. By having an overview of all the needs identified by the class members, each participant has the opportunity to share his/her ideas and at the same time obtain insights about other perspectives. The contamination is further encouraged by taking advantage of a multidisciplinary faculty complemented with keynotes with different career experiences and roles in the healthcare sectors (Table 1).

Finally, the modules have several labs in which students could experiment with the tools learned in the lectures with the assistance and support of a tutor.

Overall, the variety of methods employed in the program reflect a positioning in the pedagogy-andragogy continuum (Hägg and Kurczewska, 2019), which is consistent with audience and objectives of the program. By combining methods borrowed from both pedagogy (e.g., frontal lectures) and andragogy (e.g., labs), HC.LAB ensures a gradual maturation of the learners. At the beginning of the course, they need to become aware of entrepreneurship and then build on this awareness towards the end of the course; they gradually develop skills to actually engage in the entrepreneurial process of opportunity development.²

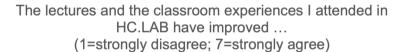
²We are grateful to an anonymous reviewer for this valuable suggestion.

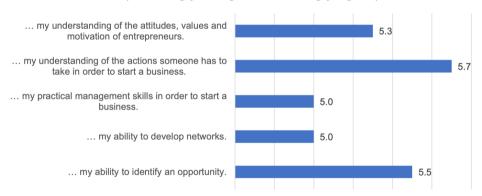
5. Findings

The survey administered at the end and at the start of the program offers some qualitative evidence about the impact caused by the course design.

First, the authors discuss the questions related to students' satisfaction with the program (Figures 1-3). On average, students were satisfied with the course in terms of entrepreneurial learning (Figure 1), as evaluated on the scale used by Souitaris et al. (2007) and Hahn et al. (2017). The entrepreneurial learning scale covers the main elements taught the "education for entrepreneurship" paradigm: not only hard facts about business creation but also soft skills and motivations. Most of them perceived the program as totally or predominantly effective (Figure 2). Moreover, about more than half of the respondents considered the course as an investment in the medium-long term, while almost one fifth perceived HC.LAB as an opportunity to empower their competencies (Figure 3).

Fig. 1: Perceived entrepreneurial learning from HC.LAB

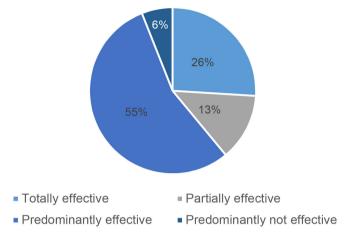




Source: Authors' elaboration

Fig. 2: Overall students' assessment of HC.LAB

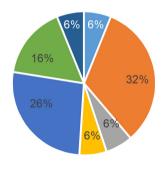
In your opinion in the HC.LAB program has been overall ...



Source: Authors' elaboration

Fig. 3: Meaning of HC.LAB to participants

What has HC.LAB represented to you?



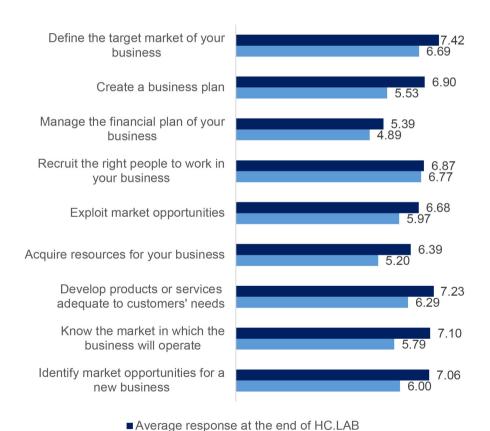
- A short-term investment
- A long-term investment
- Socialization
- Other
- A medium-term investment
- An opportunity to empower mu competencies
- Contact with the labor market

Source: Authors' elaboration

Second, in line with the course objectives focused on empowering students' opportunity development and teamwork skills, the authors checked the change of these abilities during the course (Figures 4-5). Figure 4 shows that students on average exit the course with higher perceived skills in those tasks required to develop entrepreneurial opportunities: identify needs and target market, plan the business, marshal resources, implement the opportunity (Kickul et al., 2009). After the course, students were also more confident about their leadership and collaboration skills (Figure 5).

Fig. 4: Change entrepreneurial skills of HC.LAB to participants

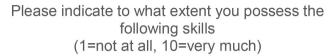
Please indicate to what extent you possess the following skills
(1=not at all; 10=very much)

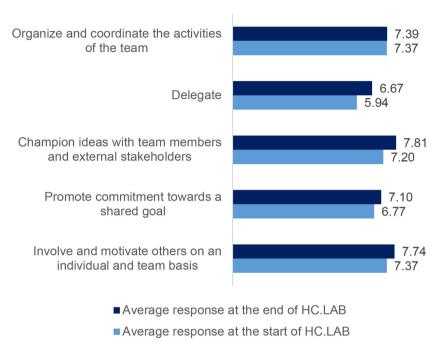


Source: Authors' elaboration

Average response at the start of HC.LAB

Fig. 5: Change in collaboration and leadership skills of HC.LAB to participants



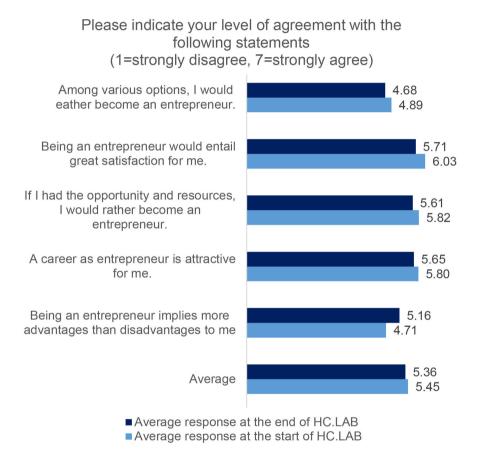


Source: Authors' elaboration

However, looking at the change in entrepreneurial attitudes (Liñán and Chen, 2009), a decline is observable after the course (Figure 6), suggesting that increased skills do not necessarily translate into the propensity towards founding a business (Souitaris et al., 2007). This is confirmed by students' preferred career choice before and after the course. At the start of the course, there were six students who wanted to become founders right after their studies, two of these changed their idea, and only one student developed this career aspiration during the course. Looking at career aspirations for 5 years after finishing studies (Zellweger et al., 2011), we had 13 aspiring founders at the start of the course. At the end of the course, two students developed this aspiration, but three aspiring founders changed their idea and chose another career path. Even though this might appear to be a bad outcome at first glance, we must evaluate this result based on the objectives of the course, which is to increase entrepreneurial skills rather than convince students to found a business. In fact, by adopting a different view,, discou-

raging some students from becoming entrepreneurs, at least in this type of course, can be seen as a beneficial outcome (von Graevenitz et al., 2010). It indicates that students have become more aware of the requirements of an entrepreneurial career and can make a more objective evaluation that is less conditioned by social desirability biases (Eesley and Lee, 2021).

Fig. 6: Change in attitudes towards entrepreneurship of HC.LAB to participants



Source: Authors' elaboration

Students' answers to the open questions seem to confirm the increased awareness and confidence acquired during the program. They offer some key quotes that describe how HC.LAB has proven to be a great learning experience for the students³. One student writes: "I believe there are no words to

 $^{^3}$ Note that students answered the questionnaire in Italian; therefore, quotes are translated from Italian by the authors.

express my gratitude to those people who allowed me to participate in this project. I have been able to understand and learn things that I didn't know before this course and which seemed impossible to understand". In general, students perceived that they acquired skills in generating and developing innovative ideas, in working in teams, and in communicating with others, in line with the course objectives. The reciprocal learning from other participants and the contamination, one the pillars of HC.LAB, was also greatly appreciated, as illustrated for example by this student "I enjoyed a lot confronting myself with older people. It has been challenging but I recommend it to everyone who wants to learn and is curious". Interestingly, according to the students, the program is useful to empower them as people, not necessarily as entrepreneurs. This student well illustrates such an impression: "The lectures often were very useful also for the private sphere, to face every-day life situations". In terms of criticalities, some students – especially the younger ones – say that they lacked the knowledge to fully understand some topics of the course. On the other hand, they were grateful to the faculty which helped them and did not take anything for granted. In the end, they felt that they were in the right place and learned from other perspectives. Moreover, some students expressed an interest to get some more knowledge about founding a business. While this is outside the scope of the course, the program stimulated students' interest towards creating a business and to realize the ideas generated during the program.

Another indicator that certifies the realization of the course objectives is the heterogeneous composition of the eight final teams. As shown in Table 2, the teams are characterized by heterogeneity in terms of the members' backgrounds, in line with the "contamination" goal of the program.

We also base the evaluation on the quality of the final presentations and on students' decision to work further on their entrepreneurial ideas. The audience at the final event appreciated the problems identified by the students and the proposed solutions. Moreover, through the final presentation, the faculty realized all of the progress made by the students with respect to the beginning of the course. Before starting this journey, most participants ignored entrepreneurship fundamentals and the features of the healthcare sector. They had no clue about developing entrepreneurial opportunities and working in heterogeneous teams. Also, they had much less confidence in talking in public and presenting in front of many people. This scenario completely changed in six months. Those students, previously almost unaware about spotting entrepreneurial opportunities, were able to generate a business model in a very complex sector like healthcare and present it in front of an audience of industry experts. This is a considerable result which fulfils the promise and the rationale for the efforts spent by the faculty, the students, and all of the stakeholders of the HC.LAB.

Finally, it is important to stress that for most participants the final event

of HC.LAB represents the end of a journey and the start of another one. In fact, more than half of the teams are so excited about their entrepreneurial opportunity that they have decided to further develop it into a business plan by joining the business plan competition StartCup. This represents another key result of HC.LAB. The program encourages students to further grow their entrepreneurial skills and, who knows, eventually create a venture to pursue the opportunity spotted in HC.LAB.

6. Discussion

Using HC.LAB as a revelatory case, this paper contributes to the advancement of EE research by showing how EE can be informed by insights from entrepreneurship research and general education. Notwithstanding the limited generalizability of single case studies, the approach described could inspire the design of EE programs in other contexts.

First, the program builds on the conceptualization of entrepreneurship as a process of opportunity identification and exploitation (McMullen and Shepherd, 2006). It focuses on a specific stage of the entrepreneurial process (i.e. opportunity development). Such a clear definition of the objective allows the design and proper alignment other elements of the program in terms of audience, content, methods, and evaluation.

Second, entrepreneurship is a socially embedded phenomenon that is stimulated by the exchange of domain-specific knowledge through local ties (Dahl and Sorenson, 2009). Accordingly, the program offers a specific industry focus, taking advantage of the strengths of the local economy.

At the same time, to generate entrepreneurial opportunities, domainspecific knowledge must be seen from different angles (Hahn et al., 2019). Here comes the third key element of originality that can inspire other initiatives. The program builds on contamination as the main pillar. Designing programs attended by students from different campuses is challenging from an organizational point of view, but it offers much richer learning opportunities. Moreover, involving teachers and speakers with different backgrounds further allows students to take advantage of the cross-fertilization among multiple perspectives.

Finally, entrepreneurial learning is a life-long process (Cope, 2005). Therefore, in line with recent recommendations about ecosystems for student entrepreneurship (Wright et al., 2017), the program does not work in isolation. The program is strategically embedded in the EE offered by the university and acts in synergy with other courses. It motivates and prepares students to better take advantage of programs dedicated to more advanced stages of the entrepreneurial process.

6.1 Contributions to research

This case study offers two main contributions to research in EE. First, the research addresses the gap between the design of EE and the development of both the entrepreneurship field and the general education field, thereby addressing one of the reasons that limits the advancement of EE scholarship (Fayolle, 2013). To do so, we have shown how different streams of entrepreneurship research (e.g., opportunity, teams, knowledge spillovers, learning and cognition) as well recent recommendations of innovative learning environments (e.g., experiential-based and social learning, connection with different subjects and with the external world) can help to design the elements of EE programs in terms of objectives, audience, content and methods, and assessment.

Second, the paper shows how EE programs can be positioned in the pedagogy-andragogy continuum (Hägg and Kurczewska, 2019) through a combination of different teaching methods with the aim to allow a progressive maturation of learners along a structured program. By doing so, we endorse the view that both pedagogy and andragogy have their merits in the context of EE, and they can be synergistically employed to motivate and enable students to acquire knowledge from lectures and develop skills through practice-oriented labs.

Finally, this paper contributes to the literature on student entrepreneurship by showing how to combine technological and entrepreneurial knowledge synergistically in one program (Shah and Pahnke, 2014). By doing so, universities can equip students with the skills necessary to undertake an entrepreneurial career, if they decide to do so.

6.2 Limitations and future research directions

Before discussing the practical implication offered by the paper, the authors present its limitations, which generate opportunities for future research on CLabs for the next years. For example, the case study focused on the results of a specific program, which limits the generalizability of the results (Shih and Huang, 2017). It would be interesting to compare the effects of different programs using matching techniques. Within the same program, experimental research designs could also help to track the causal effect of specific measures. Using control groups of students who did not attend EE, would also allow conducting quasi-experimental research (Rauch and Hulsink, 2015), thereby assessing more rigorously the impact of the program. Ethnographic research or experience-based sampling approaches could provide us with further insights about the self-reflection and learning processes experienced by students during the course in terms of stress and well-being (Secundo et al., 2021). Moreover, taking advantage

of multiple cross-sections and of longitudinal research designs, it would be intriguing to observe CLab students' careers in the long term (Eesley and Lee, 2021). Finally, while this paper focuses on the edition of HC.LAB not affected by the outbreak of Covid-19, future research could look at the implications of the pandemic and the resulting digitalization of education on the design and outcome of the program, as compared to previous editions (Ratten and Jones, 2020; Secundo et al., 2021).

6.3 Practical implications

The experience of HC.LAB offers several practical implications for the design of EE programs. In particular, the research encourages the development of courses that allow participants to connect with individuals from other disciplinary areas and with the specific sector on which they are focusing. The possibilities offered by digitalization should make this even easier (Bacq et al., 2020). This case also suggests preparing students for more experiential-based learning through lectures and keynotes, thereby combining elements of pedagogy and andragogy. Blended learning approaches, combining distance learning and in-presence activities, could be particularly useful for this purpose (Ratten and Jones, 2020).

7. Conclusions

To conclude, offering programs such HC.LAB represents a challenge which requires substantial effort. It requires a strong relationship with the local business community, commitment from the university to attract students and professors from different areas, and synergy with other EE offerings. However, the resulting experience provides students with a unique opportunity to develop a combination of skills, which will be useful for whatever career they decide to undertake.

References

Aldrich, H. E., and Ruef, M. (2006). Organizational evolution and entrepreneurship, *Sage Publications*.

Aldrich, H. E., and Ruef, M. (2003). A theory of entrepreneurial opportunity identification and development, *Journal of Business Venturing*, 18.1: 105-123.

Åstebro, T., Navid B., and Braguinsky, S. (2012). Startups by recent university graduates and their faculty: Implications for university entrepreneurship policy, *Research Policy*, 41.4: 663-677.

Audretsch, D., Colombelli, A., Grilli, L., Minola, T. and Rasmussen, E. (2020). Innovative start-ups and policy initiatives, *Research Policy*, 104027.

Audretsch, D. B. (2014). From the entrepreneurial university to the university for the entrepreneurial society, *The Journal of Technology Transfer*, 39.3: 313-321.

Bacq, S., Geoghegan, W., Josefy, M., Stevenson, R., and Williams, T. A. (2020). The COVID-19 Virtual Idea Blitz: Marshaling social entrepreneurship to rapidly respond to urgent grand challenges, *Business Horizons*, 63.6: 705-723

Bae, T. J., Qian, S., Miao, C., and Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta–analytic review, *Entrepreneurship Theory and Practice*, 38.2: 217-254.

Baron, Robert A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs "connect the dots" to identify new business opportunities, *Academy of management perspectives*, 20.1: 104-119.

Béchard, J., and Grégoire, D. (2005). Entrepreneurship education research revisited: The case of higher education, *Academy of Management Learning & Education*, 4.1: 22-43.

Bergmann, Heiko, et al. (2018). The climate for entrepreneurship at higher education institutions", Research Policy, 47.4: 700-716.

Bergmann, H., Geissler, M., Hundt, C., and Grave, B. (2016). What makes student entrepreneurs? On the relevance (and irrelevance) of the university and the regional context for student start-ups, *Small Business Economics*, 47.1: 53-76.

Blenker, P., Elmholdt, S. T., Frederiksen, S. H., Korsgaard, S., and Wagner, K. (2014). Methods in entrepreneurship education research: a review and integrative framework. *Education & Training*, 56.8/9: 697.

Castellano, S., Maalaoui, A., Safraou, I., and Reymond, E., (2014). Linking intuition and entrepreneurial intention: a comparative study among French and US student entrepreneurs, *International Journal of Entrepreneurship and Innovation Management*, 18.1: 23-44.

Chang, J., and Rieple, A. (2013). Assessing students' entrepreneurial skills development in live projects, *Journal of Small Business and Enterprise Development*.

Colombo, M. G., and Piva, E. (2020). Start-ups launched by recent STEM university graduates: The impact of university education on entrepreneurial entry, *Research Policy*, 49.6: 103993.

Cope, J. (2005). Toward a dynamic learning perspective of entrepreneurship, *Entrepreneurship theory and practice*, 29.4: 373-397.

Dahl, M.S., and Sorenson, O. (2009). The embedded entrepreneur, *European Management Review*, 6.3: 172-181.

Davey, T., Meerman, A., Orazbayeva, B., Riedel, M., Galán–Muros, V., Plewa, C., Eckert, N. (Eds.). (2018). The Future of Universities Thoughtbook: 40 Perspectives on how engaged and entrepreneurial universities will drive growth and shape our knowledge–driven future until 2040, University Industry Innovation Network.

DeTienne, D. R., and Chandler, G. N. (2004). Opportunity identification and its role in the entrepreneurial classroom: A pedagogical approach and empirical test, *Academy of management learning & education* 3.3: 242-257.

Eesley, CE, and Lee, YS. (2021). Do university entrepreneurship programs promote entrepreneurship?, *Strategic Management Journal*, 42: 833–861.

Eisenhardt, K.M. (1989). Building theories from case study research, *Academy of Management Review*, 14.4: 532-550

EPC. (2018). Recommendation of the European Parliament and the Council of 17 January 2018 on key competences for lifelong learning 2018/0008 (NLE).

Fayolle, A. (2013). Personal views on the future of entrepreneurship education, In A research agenda for entrepreneurship education. Edward Elgar Publishing.

Fayolle, A., and Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence, *Journal of Small Business Management*, 53.1: 75-93.

Feola, R., Vesci, M., Botti, A., and Parente, R. (2019). The determinants of entrepreneurial intention of young researchers: Combining the theory of planned behavior with the triple Helix model, *Journal of Small Business Management*, 57.4: 1424-1443.

Fiore, E., Sansone, G., and Paolucci, E. (2019). Entrepreneurship education in a multidisciplinary environment: evidence from an entrepreneurship programme held in Turin, *Administrative Sciences*, 9.1: 28.

Garbuio, M., and Lin, N. (2019). Artificial intelligence as a growth engine for health care startups: emerging business models, *California Management Review*, 61.2: 59-83.

Gielnik, M., Frese, M., Kahara-Kawuki, A., Katono, I. W., Kyejjusa, S., Ngoma, M., Munene, J., Namatovu, R., Nansubuga, F., Orobia, L., Oyugi, J., Sejjaaka, S., Sserwanga, A., Walter, T., Bischoff, K. M., and Dlugosch, T. J. (2015). Action and action-regulation in entrepreneurship: Evaluating a student training for promoting entrepreneurship, *Academy of Management Learning & Education*, 14.1: 69-94.

Haase, H., and Lautenschläger, A. (2011). The 'teachability dilemma' of entrepreneurship. *International Entrepreneurship and Management Journal*, 7.2: 145-162.

Hägg, G., and Kurczewska, A. (2019). Who is the student entrepreneur? Understanding the emergent adult through the pedagogy and andragogy interplay, *Journal of Small Business Management*, 57: 130-147.

Hahn, D. (2020). The psychological well-being of student entrepreneurs: a social identity perspective, *International Entrepreneurship and Management Journal*, 1-33.

Hahn, D., Minola, T., Bosio, G., and Cassia, L. (2020). The impact of entrepreneurship education on university students' entrepreneurial skills: a family embeddedness perspective, *Small Business Economics* 55.1: 257-282.

Hahn, D., Minola, T. and Eddleston, K. (2019). How do Scientists Contribute to the Performance of Innovative Start □ups? An Imprinting Perspective on Open Innovation, *Journal of Management Studies*, 56.5: 895-928.

Hahn, Davide, et al. (2017). Entrepreneurial education and learning at universities: exploring multilevel contingencies, *Entrepreneurship & Regional Development*, 29.9-10: 945-974.

Honig, B. (2004). Entrepreneurship education: Toward a model of contingency-based business planning, *Academy of Management Learning & Education*, 3.3: 258-273.

Huber, L. Rosendahl, S. Parker, R. Sloof and M. Van Praag (2020). Diverse Cognitive Skills and Team Performance: A Field Experiment Based on an Entrepreneurship Education Program, *Journal of Economic Behavior & Organization*, forthcoming

Kacperczyk, A. J. (2013). Social influence and entrepreneurship: The effect of university peers on entrepreneurial entry, *Organization Science*, 24.3: 664-683.

Karimi, S., Biemans, H. J. A., Lans, T., Chizari, M., and Mulder, M. (2016). The impact of entrepreneurship education: A study of Iranian students' entrepreneurial intentions and opportunity identification, *Journal of Small Business Management*, 54.1: 187-209.

Karlsson, T., and Moberg, K. (2013). Improving perceived entrepreneurial abilities through education: Exploratory testing of an entrepreneurial self-efficacy scale in a pre-post setting, *The International Journal of Management Education*, 11.1: 1-11.

Kickul, J.R., Gundry, L., Barbosa, S.D., and Whitcanack, L. (2009). Intuition versus

analysis? Testing differential models of cognitive style on entrepreneurial self–efficacy and the new venture creation process, *Entrepreneurship Theory and Practice*, 33.2: 439-453.

Klotz, A. C., Hmieleski, K. M., Bradley, B. H., and Busenitz, L. W. (2014). New venture teams: A review of the literature and roadmap for future research, *Journal of Management*, 40.1: 226-255.

Knockaert, M., Ucbasaran, D., Wright, M., and Clarysse, B (2011). The relationship between knowledge transfer, top management team composition, and performance: The case of science–based entrepreneurial firms, *Entrepreneurship Theory and Practice*, 35.4: 777-803

Lackéus, M. (2015). Entrepreneurship in education: What, why, when, how, Entrepreneurship 360. background paper, available at: www.oecd.org/(accessed 6 October 2017).

Laukkanen, M. (2000). Exploring alternative approaches in high-level entrepreneurship education: creating micromechanisms for endogenous regional growth, *Entrepreneurship & Regional Development* 12.1: 25-47.

Leitch, C., Hazlett, S., and Pittaway, L. (2012). Entrepreneurship education and context, *Entrepreneurship & Regional Development*, 24:9-10, 733-740.

Leitch, C., Hazlett, S., and Pittaway, L. (2009). Development and cross–cultural application of a specific instrument to measure entrepreneurial intentions, *Entrepreneurship Theory and Practice*, 33.3: 593-617.

Lyons, E., and Zhang, L. (2018). Who does (not) benefit from entrepreneurship programs?, *Strategic Management Journal*, 39.1: 85-112.

Martin, Bruce C., Jeffrey J. McNally, and Michael J. Kay. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes, *Journal of Business Venturing*, 28.2: 211-224.

Mcgee, J.E., Peterson, M., Mueller, S.L., and Sequeira, J.M. (2009). Entrepreneurial self-efficacy: Refining the measure, *Entrepreneurship Theory and Practice*, 33.4: 965-988.

McMullen, J. S., and Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur, *Academy of Management Review*, 31.1: 132-152.

McNally, J. J., Piperopoulos, P., Welsh, D. H., Mengel, T., Tantawy, M., and Papageorgiadis, N. (2020). From pedagogy to andragogy: Assessing the impact of social entrepreneurship course syllabi on the Millennial learner. *Journal of Small Business Management*, 58.5: 871-892.

Meoli, A., Fini, R., Sobrero, M., and Wiklund, J. (2020) How entrepreneurial intentions influence entrepreneurial career choices: The moderating influence of social context, *Journal of Business Venturing*, 35.3: 105982.

Minola, T., Donina, D., and Meoli, M. (2016). Students climbing the entrepreneurial ladder: Does university internationalization pay off?, Small Business Economics, 47.3: 565-587.

Minola, T., Donina, D., and Meoli, M. (2009). Technology management education: Innovation and entrepreneurship at MINES ParisTech, a leading French engineering school, *Academy of Management Learning & Education*, 8.3: 418-425.

Nabi, Ghulam, et al. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda, *Academy of Management Learning & Education*, 16.2: 277-299.

Naia, R. Baptista, C. Januário, and V. Trigo. A (2014). A systematization of the literature on entrepreneurship education: challenges and emerging solutions in the entrepreneurial classroom, *Industry and Higher Education*, 28.2: 79-96.

Naia, R. Baptista, C. Januário, and V. Trigo. A (2011). Entrepreneurship education: known worlds and new frontiers, *Journal of Small Business Management* 49.1: 55-70.

OECD (2017). The OECD Handbook for Innovative Learning Environments. Paris: OECD Publishing.

Naia, R. Baptista, C. Januário, and V. Trigo. A (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation, *European Economic Review*, 54.3: 442-454.

Parente, Simona, et al. (2019). Culture and Environment as Antecedents of Technological Entrepreneurship, *Engineering Digital Transformation*. Springer, Cham, 67-74.

Peterman, N. E., and Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship, *Entrepreneurship Theory and Practice*, 28.2:129-144.

Piperopoulos, P., and Dimo D. (2015). Burst bubbles or build steam? Entrepreneurship education, entrepreneurial self ☐ efficacy, and entrepreneurial intentions, *Journal of Small Business Management*, 53.4: 970-985.

Pittaway, L., and Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence, *International Small Business Journal* 25.5: 479-510.

Politis, D. (2005). The process of entrepreneurial learning: A conceptual framework, *Entrepreneurship Theory and Practice*, 29.4: 399-424.

Preller, R., Patzelt, H., and Breugst, N. (2020). Entrepreneurial visions in founding teams: Conceptualization, emergence, and effects on opportunity development, *Journal of Business Venturing*, 35.2: 105914.

Ratten, V., and Jones, P. (2020). Covid-19 and entrepreneurship education: Implications for advancing research and practice, *The International Journal of Management Education*, 100432.

Rauch, A., and Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior, *Academy of Management Learning & Education*, 14.2: 187-204.

Sansone, G., Battaglia, D., Landoni, P., and Paolucci, E. (2019). Academic spinoffs: the role of entrepreneurship education, *International Entrepreneurship and Management Journal*, 1-31.

Secundo, G., Mele, G., Vecchio, P. D., Elia, G., Margherita, A., and Ndou, V. (2021). Threat or opportunity? A case study of digital-enabled redesign of entrepreneurship education in the COVID-19 emergency. *Technological Forecasting and Social Change*, 166, 120565.

Secundo, G., Mele, G., Sansone, G., and Paolucci, E. (2020)a. Entrepreneurship Education Centres in universities: Evidence and insights from Italian "contamination lab" cases, *International Journal of Entrepreneurial Behavior & Research*.

Secundo, G., et al. (2020)b. Entrepreneurship Education Centres in universities: evidence and insights from Italian "Contamination Lab" cases, *International Journal of Entrepreneurial Behavior & Research*

Secundo, G., Mele, G., Sansone, G. and Paolucci, E. (2020)c. Digital transformation in entrepreneurship education centres: preliminary evidence from the Italian Contamination Labs network, *International Journal of Entrepreneurial Behavior & Research*, 26.7: 1589-1605...

Shenton, A. K. "Strategies for ensuring trustworthiness in qualitative research projects." *Education for information* 22.2: 63-75.

Shih, T., and Huang, Y. Y. (2017). A case study on technology entrepreneurship education at a Taiwanese research university. *Asia Pacific Management Review*, 22.4: 202-211.

Shah, S. K., and Pahnke, E. C. (2014). Parting the ivory curtain: understanding how universities support a diverse set of startups, *The Journal of Technology Transfer* 39.5: 780-792.

Shane S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities, *Organization Science*, 11.4: 448-469.

Shane S., and Venkataraman S. (2000). The promise of entrepreneurship as a field of research, Academy of Management Review, 25.1: 217-226.

Shinnar, R., Pruett, M., and Toney, B. (2009). Entrepreneurship education: Attitudes across campus, *Journal of Education for Business*, 84.3: 151-159.

Souitaris, V., Zerbinati, S., and Al-Laham A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources, *Journal of Business Venturing*, 22.4: 566-591.

UNDESA (2020). Exploring Youth Entrepreneurship, United Nations, New York.

Urbano, D., and Guerrero M. (2013). Entrepreneurial universities: Socioeconomic impacts of academic entrepreneurship in a European region, *Economic Development Quarterly*, 27.1 (2013): 40-55.

Volery, T., Müller, S., Oser, F., Naepflin, C. and del Rey, N. (2013). The impact of entrepreneurship education on human capital at upper□secondary level, *Journal of Small Business Management* 51.3: 429-446.

Von Graevenitz, G., Dietmar Harhoff, and Richard Weber (2010). The effects of entrepreneurship education, *Journal of Economic Behavior & Organization*, 76.1: 90-112.

Wennberg, K., Wiklund, J., and Wright, M. (2011). The effectiveness of university knowledge spillovers: Performance differences between university spinoffs and corporate spinoffs, *Research Policy*, 40.8, 1128-1143.

Wright, M., Donald S. Siegel, and Philippe Mustar (2017). An emerging ecosystem for student start-ups, *The Journal of Technology Transfer*, 42.4: 909-922.

Yin, R.K. (2009). Case Study Research, Design and Methods (4th ed.). Sage Publications. Zellweger, T., Sieger, P., and Halter, F. (2011). Should I stay or should I go? Career choice intentions of students with family business background, *Journal of Business Venturing*, 26.5: 521-536.



Rivista Piccola Impresa/Small Business

n. 1. anno 2021

Codice ISSN 0394-7947 - ISSNe 2421-5724

AN OVERVIEW OF STUDENTS' ENTREPRENEURIAL INTENTION ANTECEDENTS

Linda Gabbianelli University of Urbino linda.gabbianelli@uniurb.it

Giorgio Mion University of Verona giorgio.mion@univr.it

Angelo Bonfanti University of Verona angelo.bonfanti@univr.it

Cristian R. Loza Adaui Friedrich-Alexander University Erlangen-Nürnberg cristian.loza.adaui@fau.de

Article info

Date of receipt: 31/07/2020 Acceptance date: 04/04/2021

Keuwords: Students' entrepreneurial intention; Entrepreneurial behaviour; Entrepreneurship education; Educational programs; Entrepreneur career

doi: 10.14596/pisb.2841

Abstract

This paper provides an overview of antecedents of the students' entrepreneurial intention (SEI). A selection, collection, analysis, and systematization of previous studies was carried out to update and reorder the available literature about factors influencing SEI. The analysis reveals the following three sets of antecedents of SEI: 1) factors related to personality traits, 2) contextual/situational factors and 3) factors related to personal background. In addition, this study highlights specific theoretical models used to investigate factors influencing students' intention to start a new business, such as the theory of planned behaviour model, the entrepreneurial event model and the social cognitive theory. These results contribute to organising the current state of knowledge about the antecedents of SEI and addressing future research by providing a spectrum of variables that can act as a base to develop further analytical models and theoretical constructs about this topic.

1. Introduction

Entrepreneurship is a significant driver of national economic growth, societal development and wellbeing (e.g. Uddin and Bose, 2012; Douglas et al., 2020). Over the past few decades, researchers and universities have both paid increasing attention to identifying ways of developing entrepreneurship and of providing the related education/training to potential entrepreneurs. In this direction, entrepreneurship is a skill that students, especially recent graduates, should acquire to begin entrepreneurial activities as an attractive and realistic employment option (e.g. Brioschi et al., 2014; Del Giudice et al., 2014; Fayolle and Gailly, 2015; Leonelli et al., 2016; Meoli et al., 2019; Brioschi et al., 2019/2020). An important predictor of entrepreneurship is entrepreneurial intention (EI)—the desire and commitment to start a business (e.g. Zeffane, 2012). Studies have highlighted that people with lower EI are less likely to start a business than those with higher EI (Turker and Selcuk, 2009; Varghese and Hassan, 2012). In particular, it is important to study this aspect in relation to future generations (Opoku-Antwi et al., 2012). Therefore, it is valuable to examine this topic in the context of students since they are potential business leaders. The increasing interest from scholars and consequent growth in recent articles on students' EI highlight the need for greater understanding and investigation of this specific topic, which fits in the more comprehensive field of student entrepreneurship (SE). More precisely, given that EI is the first step of launching a business—and thus, a main factor in the process of creating new enterprises (e.g., Krueger et al., 2000; Schlaegel and Koenig, 2014; Ramos-Rodríguez et al., 2019)—it can be enlightening to examine in great depth the drivers that lead students to entrepreneurship. Therefore, a pertinent research question emerges: what are the factors influencing students' intentions for entrepreneurship?

Nevertheless, few recent studies have investigated these factors in detail. To the best of the authors' knowledge, only one study has provided a literature review specifically devoted to the factors influencing students' intentions towards entrepreneurship (Al-Harrasi et al., 2014). More precisely, this study proposed a review that results be dated, given that analysis was extended only up to 2013, and focused solely on the management engineering field. The lack of recent contributions specifically aimed at analyzing the entrepreneurship literature on this topic suggests the importance of undertaking an updated review and further investigation.

Therefore, this study aims to provide an overview of antecedents of students' entrepreneurial intention (SEI). A wide spectrum of potentially relevant literature has been identified to be systematically assessed in order to update—and organise—the extensive factors influencing SEI that recently emerge by empirically grounded evidence.

The results of this paper contribute to organising the current state of knowledge about the antecedents of SEI and to highlighting future research directions by providing interested scholars with relevant information on factors influencing SEI. This study provides academics with a spectrum of variables that would act as a theoretical foundation for future analysis models on this topic.

The remainder of this paper is structured as follows. Section 2 describes the SE and EI concepts and the antecedents of SEI. Section 3 explains the research method used in this study, while Section 4 presents and Section 5 discusses the analysis results. Last, Section 6 concludes the paper providing directions for future research.

2. Literature review

2.1 Student entrepreneurship and entrepreneurial intention

SE is a process involving the innovative use and combination of resources by a student to explore and pursue opportunities by creating a for-profit business organisation (Gupta and Gupta, 2017). Bergmann et al. (2016) defined SE as the venture creation activities of people who are currently studying at a university, whereas Colombo et al. (2017) referred to the choice of students and recent graduates to establish a business. This choice can be influenced by several factors, such as the degree program attended and the university at which this was held, the family context, students' personal motivations and the social and cultural context (Fasone and Puglisi, 2019).

Notably, student entrepreneurs are those who create a business during university studies (Colombo et al., 2017), within specific degree courses (Premand et al., 2016; Zollo et al., 2017) or universities (Isada et al., 2015; Trivedi, 2017) or three years after graduation (Åstebro et al., 2012). Marchand and Hermens (2015) defined student entrepreneurs as individuals attending award classes at university and conducting innovative and revenue-generating entrepreneurial activities. These entrepreneurial students capitalise on the various opportunities in the university environment, such as specialised professors, spaces and support services (e.g. incubators); patent and copyright protections and advisory provided by the university; and their classroom learning (Mars et al., 2008). In addition, they may also use universities and faculty members or students to validate and market products and services. Volkmann (2004) emphasised that entrepreneurship is not acquired or innate; rather, it is developed by education. In this sense, during their academic experience, students can learn how to be entrepreneurs (Filion, 1999). From this perspective, entrepreneurship education can

cultivate relevant attitudes and intentions in students, enhancing their ability to create new companies (Liñán, 2008). In other words, entrepreneurial education enriches students' knowledge and skills, and influences their EI.

Essentially, EI is a state of mind—people wish to create a new firm or a new value driver within existing organisations (Wu and Wu, 2012; Nabi et al., 2006; Guerrero et al., 2008). According to Liñán et al. (2013), EI is a conscious awareness and conviction by an individual to establish a new business venture in the future. It refers to intentions to be self-employed or to establish a business (Iakovleva and Kolvereid, 2009). EI refers to one's desire to own a business (Crant, 1996) or establish a business (Krueger et al., 2000) or 'one's desire, wish and hope of becoming an entrepreneur' (Isiwu and Onwuka, 2017, p. 183). Generally, intentions have been used to describe an expected behaviour (Ajzen, 1991). In this regard, intention refers to 'the indication of how hard people are willing to try, of how much an effort they are planning to exert, in order to perform the behavior' (Ajzen, 1991, p. 181). The stronger the intention, the more likely that a person will perform a particular behaviour.

In entrepreneurship, the debate about intentions as predictors of entrepreneurial action remains open. For example, Douglas and Shepherd (2002) expressed doubt about this aspect, whereas others have argued that EI is a key antecedent of entrepreneurial behaviour (Krueger et al., 2000; Lee et al., 2011). In this sense, the analysis of EI is key to explaining the process of companies' creation (e.g. Devonish et al., 2010; Liñán and Fayolle, 2015). Studying the antecedents of EI becomes important to understand the factors that can contribute to creating a new venture, especially those that can push university students towards entrepreneurship. In addition, this study can serve as a starting point to design effective training courses for SE.

2.2 Antecedents of students' entrepreneurial intention

Although an increasing number of studies are focusing on EI, the systematization and categorization of this research field is hitherto in its infancy, especially with reference to SEI. More precisely, only one study was found to propose a literature review of factors affecting EI and only one about SEI. Specifically, Liñán and Fayolle (2015) reviewed the entrepreneurship and management literature to provide a clearer picture of the subfields in EI research. They reviewed 409 papers published between 2004 and 2013 and categorised the most important areas of specialisation within EI. In addition, they recognised subthemes within each of area specialisation: context and institutions, personal level variables, core EI model, entrepreneurial process and entrepreneurship education. However, their study refers to EI in general.

Al-Harrasi et al. (2014) focused on SEI, but they conducted their rese-

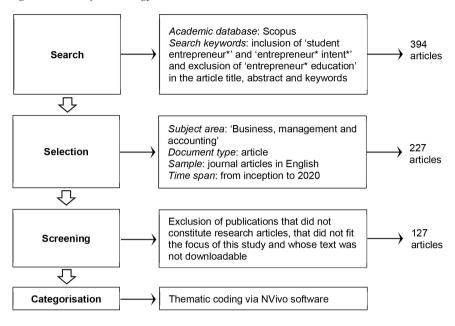
arch with specific reference to management engineering. Specifically, they attempted to provide a systematic literature review of the key factors that lead undergraduate students to become entrepreneurs. They analysed articles published in 2003–2013 by highlighting four main sets of factors: personality trait, contextual, motivational and personal background factors.

Both these studies are dated because they considered and analysed papers published before 2013. Based on the growing attention to SE and the lack of an updated overview of factors influencing the EI of university students, a need to take stock of current knowledge in this entrepreneurship and management field emerges. For this purpose, the present study aims to contribute to fill this gap by organising the current state of knowledge about the antecedents of SEI and to highlight future research directions.

3. Methodological approach

This study employed a research synthesis method of peer-reviewed scholarly literature (Cooper, 2016) on SE and EI. In continuity with several previous studies, the choice of this method is connected to the opportunity of integrating results from both qualitative and quantitative studies in a shared domain of empirical research as well as its rigour. More precisely, it minimises bias by discussing the single systematisation steps and enables potential replication by other researchers through the transparent provision of single steps (Tranfield et al., 2003). Specifically, four steps were undertaken (see Figure 1): 1) search, 2) selection, 3) screening, and 4) categorisation. Precisely, in terms of search, the researchers limited the relevant literature search to the Scopus database, one of the largest multidisciplinary academic databases of peer-reviewed literature. In this regard, the researchers complied with Webster and Watson's (2002) suggestion to collect data by including only articles that were published in academic journals and were subjected to a peer-review process.

Fig. 1: Flowchart of methodology



Source: our elaboration

The sample includes only journal articles written in English and published in business, management and accounting subject areas from inception to 2020 (inclusive). 'Student entrepreneur*' and 'entrepreneur* intent*' were used as search keywords exclusively in the article titles, abstracts and keywords to exclude articles that would only add indirect value to the study.

From the screening point of view, further publications that did not constitute research articles, such as notifications of journal special issues, books, book chapters, papers included in conference proceedings, editorials, abstracts without papers and research notes, were eliminated. In addition, the article titles and abstracts were analysed to eliminate articles that did not fit the focus of this study, such as those focused on the field of psychiatry. Further, all articles whose text was not downloadable were excluded from the study. From the initial 394 results, this step left 127 relevant articles for review.

In categorisation terms, all selected articles were imported into Qualitative Solutions and Research (QSR) NVivo 11, a qualitative analysis software. Based on the aims of this study, the coding process of articles' abstracts and full text included the combination of predefined theoretical concepts and inductively emerging ideas. Specifically, two coding phases were implemented. First, the researchers defined the list of codes following the thematic categories (or nodes) proposed by previous studies (open coding)

by identifying separately other codes to be added based on their inductive reading of the data (Saldaña, 2015). More precisely, the SEI dimensions proposed by Al-Harrasi et al. (2014) (personality traits-, contextual-, motivational-, and personal background-related factors) were used as a guideline and initial coding framework, while sub-codes (e.g., attitude towards entrepreneurship, cultural context, entrepreneurial education) were inductively derived from the coding process. Second, they employed a merged code list by considering common labels inspired by the literature and these additional codes. Intentionality was not inferred in the data. These codes, which were clustered on the basis of more general analytical factors, were used for analysis and are presented in Section 4.

4. Results: analysis and discussion

The SEI topic has attracted greater levels of research interest in the past decade, given the increasing trend in the number of articles, as highlighted in Figure 2. The earliest article appeared in 2006 and a high growth is apparent, beginning in 2019, which suggests that this research topic is relatively 'new'.

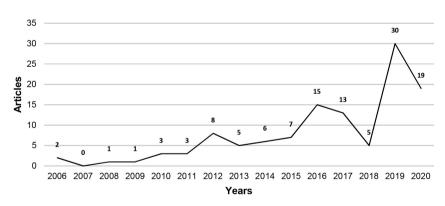


Fig. 2: Articles by year (2006-2020)

Source: our elaboration

The literature search revealed an overwhelming preponderance of empirical (99%) rather than theoretical (1%) studies. Most empirical studies employed quantitative (95%) or qualitative (3%) methods, and only a few were mixed-method studies. In theoretical terms, only two literature reviews (Al-Harrasi et al., 2014; Liñán and Fayolle, 2015) and very few conceptual papers were identified.

The current study's analysis revealed three sets of antecedents for SEI

(see Figure 3): 1) personality trait-related factors, 2) contextual/situational factors and 3) personal background-related factors. In addition, it highlighted that scholars refer to specific theoretical models to investigate factors influencing students' intentions to establish a new business.

For easy comprehension of the data in the tables and figures, it was decided to limit the presented SEI factors to the past five years (2016-2020). Notably, the choice of focusing on this period is connected to consider that since 2016 there has been an increasing trend in the number of publications.

Personality traits-related factors

Contextual/ Situational factors

Students' entrepreneurial intention

Fig. 3: Antecedents of students' entrepreneurial intention

Personal backgroundrelated factors

Source: our elaboration

4.1 Personality trait-related factors

Personality traits are the main antecedent of SEI. Given that these include numerous individual characteristics that drive entrepreneurial behaviour, multiple factors were examined in the related literature. The most relevant personality trait-related factors used to explain SEI are (in alphabetical order): abstract thinking, attitude towards entrepreneurship, (need for) autonomy, competitive aggressiveness, entrepreneurial skills, individuals' personality patterns, innovativeness, internal locus of control, need for achievement, opportunity recognition, perceived behavioural control, perceived desirability, perceived feasibility, pro-activeness, psychological traits, risktaking propensity, self-confidence, self-efficacy and stress tolerance.

As Table 1 indicates, not all these factors were simultaneously considered in previous studies. Scholars referred to four key factors to characterise personality traits by highlighting a positive impact on SEI: 1) attitude towards entrepreneurship, 2) perceived behavioural control, 3) risk-taking propensity and 4) self-efficacy. More precisely, attitude towards entrepreneurship is 'the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question' (Ajzen, 1991, p. 188). Perceived behavioural control refers to individuals' personal belief that

they can engage in a specific behaviour because they have the necessary start-up skills, business knowledge and ability to achieve business goals, along with their perception that they can control this behaviour. Risk-taking propensity includes the individual tendency to take chances in a decision-making scenario. Self-efficacy is a person's self-perception about own skills and abilities to initiate and successfully complete a given task.

Tab. 1: Personality trait-related factors affecting students' entrepreneurial intention

Five-year studies (from 2016 to 2020) in alphabetic order for first author's surname	Abstract thinking	Attitude towards entrepreneurship	(Need for) Autonomy	Competitive aggressiveness	Entrepreneurial skills	Individuals' personality patterns	Innovativeness	Internal locus of control	Needs for achievement	Opportunity recognition	Perceived behavioral control	Perceived desirability	Perceived feasibility	Pro-activeness	Psychological traits	Risk-taking propensity	Self-confidence	Self-efficacy	Stress tolerance
Ahmad et al., 2019												+	+						
Ahmed et al., 2019							+									+			+
Ali, 2016		+									+								
Al-Jubari et al., 2019		+									+								
Al-Mamary et al., 2020		+	+	+										+		+		+	
Aloulou, 2016		+									+								
Anwar et al., 2020		+									+								
Bazzy et al., 2019	+																		
Daniel and Almeida, 2020		+									+								
Díez-Echavarría et al., 2019		+											+						
Doanh and van Munawar, 2019		+																+	
Duong et al., 2020		+																+	
Echchabi et al., 2020		+									+								
Ephrem et al., 2019															+				
Farhat and Moncada, 2020														+				+	
Fietze and Boyd, 2017		+									+								

Fragoso et al., 2020	+						+	+							+		+	
Galvão et al., 2018	+									+								
Hassan et al., 2020									+								+	
Iglesias-Sánchez et al., 2016	+									+								
Kakouris, 2016				+												+		
Ladd et al., 2019	+		+			+							+		+			
Longva et al., 2020		+						+			+	+						
Looi, 2017								+										
López-Delgado et al., 2019	+					+							+				+	
Mamun et al., 2017	+					+				+					+			
Omidi Najafabadi et al., 2016	+			+										+			+	
Paiva et al., 2020	+									+								
Palmer et al., 2019		+								+								
Pérez-Fernández et al., 2020	+									+								
Phuc et al., 2020	+									+								
Ramos- Rodríguez et al., 2019	+									+								
Rodrigues et al., 2019	+									+								
Roy et al., 2017	+																	
Shah and Soomro, 2017	+																	
Shahab et al., 2019																	+	
Sharma, 2019	+																	
Soria et al., 2016	+									+								
Van Trang and Doanh, 2019	+									+								
Varamäki et al., 2016	+									+								
Vuorio et al., 2018	+										+							
Yukongdi and Lopa, 2017								+							+			
Zhou et al., 2019					+													

Source: our elaboration

This analysis revealed that perceived behavioural control and self-efficacy are factors that are not employed simultaneously. The choice to use one or the other depended on the theoretical model used by scholars as a reference in their studies.

4.2 Contextual/situational factors

Contextual (or situational) factors affecting SEI include cultural, educational, institutional and political, and social considerations. More precisely, national culture was considered an influential factor at the cultural level, while university environment can influence EI in educational terms. As institutional and political context, country norms, legal institutions and government support were viewed as the most influential factors affecting EI. Business support, networking, social capital and subjective norms were found as social drivers.

Tab. 2: Contextual/situational factors affecting students' entrepreneurial intention

Five-year studies (from 2016 to 2020) in	Cultural context	Educational context	l	nstitution nd politic context		Social context					
alphabetic order for first author's surname	National culture	University environ- ment	Country	Legal institu- tions	Government support	Business support	Networking	Social capital	Subjective norms		
Ali, 2016									+		
Al-Jubari et al., 2019									+		
Aloulou, 2016									+		
Anwar et al., 2020									+		
Arrighetti et al., 2016		+									
Canever et al., 2017											
Çera et al., 2020		+				+					
Daniel and Almeida, 2020									+		
Duong et al., 2020			+					+			
Echchabi et al., 2020											
Ephrem et al., 2019									+		
Fietze and Boyd, 2017									+		
Fragoso et al., 2020	+										

				1				,
Galvão et al., 2018								+
Henley et al., 2017							+	
Iglesias- Sánchez et al., 2016								+
Lopez and Alvarez, 2019		+						
Mamun et al., 2017				+				+
Monllor and Soto-Simeone, 2019		+						
Paiva et al., 2020								+
Palalic et al., 2016					+	+		
Palmer et al., 2019								+
Pérez- Fernández et al., 2020								+
Phuc et al., 2020								+
Rajković et al., 2020	+							
Ramos- Rodríguez et al., 2019								+
Rodrigues et al., 2019								+
Roy et al., 2017								+
Shah and Soomro, 2017								+
Shirokova et al., 2020			+					
Soria et al., 2016								+
Soria-Barreto et al., 2017		+						
Trivedi, 2016		+						
Van Trang and Doanh, 2019								+
Varamäki et al., 2016								+
Wegner et al., 2019					+			

Source: our elaboration

As Table 2 highlights, subjective norms are the key factor of SEI, given that it is incorporated in the model, including attitude towards entrepreneurship and perceived behavioural control. In particular, subjective norms refer to a person's beliefs about whether most people of importance to the person would approve or disapprove of a specific behaviour.

4.3 Personal background-related factors

Personal background-related factors affecting SEI are age, entrepreneurial education, entrepreneurial identity, family background, gender, knowledge about new business start-up, and valuation of entrepreneurship.

As Table 3 illustrates, the key factor emerging from previous studies is entrepreneurial education. Most universities have spent significant amounts of money on designing viable entrepreneurship education for students and have moved far beyond providing only courses on entrepreneurship because this now seems inadequate in isolation. According to Jansen et al. (2015), universities encourage students through three groups of activities: 1) stimulating (e.g. creating awareness of entrepreneurial opportunities and presenting role models and success stories), 2) educating (e.g. teaching the necessary skills and business plan creation) and 3) incubating (i.e. providing various forms of support to start-up teams). By offering entrepreneurship courses, training and extracurricular support, universities aim to create a supportive context for entrepreneurship, thereby enhancing students' motivation and capability to establish a business (Walter et al., 2013). Although students typically do not start a business directly after completing their studies, they may do so at a later stage in their career (Wennberg et al., 2011). Gathering entrepreneurial experience during their studies can be assumed to facilitate subsequent start-up endeavours of students and graduates.

Entrepreneurial education can play a crucial role in this regard by providing not only technical competencies, such as developing a business plan or training to access venture capital investment, but also new teaching methodologies to boost creativity, proactivity in decision-making and measured risk-taking. In other terms, educators should create a learning environment that encourages the effective expression and use of emotions to develop emotional intelligence, and equipped students with different individual entrepreneurial traits such as innovativeness, self-confidence, propensity to take risk and need for achievement in order to interpret the successful entrepreneurial role and, subsequently, undertake a future career in business.

Tab. 3: Personal background-related factors affecting students' entrepreneurial intention

Five-year studies (from 2016 to 2020) in alphabetic order for first author's surname	Age	Entrepreneurial education	Entrepreneurial identity	Family background	Gender	Knowledge about new business start-up	Valuation of entrepreneurship
Adekiya and Ibrahim, 2016		+					
Ahmed et al., 2020		+					
Badri and Hachicha, 2019	+	+			+		
Badri and Hachicha, 2019						+	
Caro-González et al., 2017					+		
Doan and Phan, 2020		+					
Fragoso et al., 2020					+		
Galvão et al., 2018				+			
García-Rodríguez et al., 2018		+					
Gelaidan and Abdullateef, 2017		+					
Iwu et al., 2019		+					
Jang et al., 2019			+				
Khalifa and Dhiaf, 2016		+					
Le Trung et al., 2020	+						
López-Delgado et al., 2019		+			+		
Mamun et al., 2017		+		+			
Martins and Perez, 2020							+
Morales-Alonso et al., 2016				+			
Nasser Al Muniri et al., 2019		+					
Okręglicka et al., 2017		+					
Palmer et al., 2019				+			
Rippa et al., 2020		+					
Westhead and Solesvik, 2016		+			+		
Yukongdi and Lopa, 2017		+			+		
Zampetakis et al., 2016				+			
Zhang et al., 2020		+					

Source: our elaboration

4.4 The theoretical models most used to examine students' entrepreneurial intention

Scholars have investigated SEI in terms of antecedents by referring to different theoretical models. As Table 4 highlights, the most used is the theory of planned behaviour (TPB) (e.g. Fragoso et al., 2020; Paiva et al., 2020; Valencia-Arias and Restrepo, 2020), followed (in frequency order) by the entrepreneurial event model of Shapero and Sokol (Omidi Najafabadi et

al., 2016; Alayis et al., 2018) and the social cognitive theory (SCT) (Henley et al., 2017; Al-Jubari et al., 2019). Specifically, the TPB, proposed by Ajzen (1991) in the social psychology context, is derived from the assumption that many human behaviours are planned and, hence, are preceded by intention towards that behaviour (Fishbein, Ajzen, 1975). Unlike other models, TPB offers a closer and applicable framework that allows scholars to understand and predict EI more precisely by focusing on personal as well as social factors (Kruger et al., 2000). Precisely, behavioural intentions are determined by three main antecedents: 1) attitude towards performing the behaviour—this indicates the degree to which the individual holds a positive or negative personal valuation about being an entrepreneur; 2) perceived behavioural control—this is defined as the perception of the ease or difficulty of becoming an entrepreneur; and 3) subjective norm: this measures the perceived social pressure to conduct or not to conduct entrepreneurial behaviour.

The entrepreneurial event model was developed by Shapero and Sokol (1982) to define the interaction of cultural and social factors that can lead to firm creation by influencing individuals' perceptions. In this sense, the model considers entrepreneurship an alternative or available option that occurs as a consequence of an external change. This model defines three basic kinds of perceptions: a) perceived desirability—includes the product of individuals' perceptions of desirability of entrepreneurship, affected by personal attitudes, values and feelings; b) perceived feasibility—relates to an individual's perception of available resources; in other words, it measures the individual's perceived ability to perform certain behaviour; and c) propensity to act—consists of the personal disposition to act on one's decisions, reflecting volitional aspects of intentions.

The SCT holds that an individual's behaviour, in this case EI, is informed not only through internal self-generated means, but also externally through observation of and engagement with others in a social context (Bandura, 1988; 1989). This theory has found expression in EI models through the concept of self-efficacy. In SCT, there is a continuous interaction between three factors: I) environment—social and physical environments, such as the people with whom the learner works, the size of a room and the ambient temperature; II) personal factors—mental cognition, such as personality, self-efficacy, curiosity and motivation to learn; and III) behaviour—affected by the situation, the cognitive or mental representations of the environment and the constant influence of the three components on one another. In other words, SCT rejects the notion that the individual self is both the sole agent and object of intentional activity, in favour of the view that it is both individual agency and the influence of the external environment that influence intentions. As Bandura (1988) stated, 'in acting as agents over their environment, people draw on their knowledge and cognitive and behavioral skills to produce desired results' (p. 1181).

As stated previously, the choice of using one or the other factor depends on the theoretical model used by scholars as a reference in their studies.

Tab. 4: The most used models to examine students' entrepreneurial intention

Five-year studies (from 2016 to 2020) in alphabetic order for first author's surname	Theory of planned behavior	Entrepreneurial event model	Social cognitive theory
Ahmad et al., 2019		•	
Ali, 2016	•		
Al-Jubari et al., 2019	•		•
Al-Mamary et al., 2020	•		
Aloulou, 2016	•		
Anwar et al., 2020	•		
Caro-González et al., 2017	•		
Daniel and Almeida, 2020	•		
Fietze and Boyd, 2017	•		
Galvão et al., 2018	•		
Henley et al., 2017			•
Iglesias-Sánchez et al., 2016	•		
Jang et al., 2019	•	•	
Khalifa and Dhiaf, 2016	•		
Mamun et al., 2017	•		
Nasser Al Muniri et al., 2019	•		
Omidi Najafabadi et al., 2016	•	•	
Paiva et al., 2020	•		
Pérez-Fernández et al., 2020	•		
Phuc et al., 2020	•		
Ramos-Rodríguez et al., 2019	•		
Rodrigues et al., 2019	•		
Shah and Soomro, 2017	•		
Soria et al., 2016	•		
Van Trang and Doanh, 2019	•		
Varamäki et al., 2016	•		

Source: our elaboration

5. Discussion

This paper provides a detailed analysis of the key factors of SEI through a review of 15 years of research on this topic (2006–2020). Therefore, it differs from previous studies focused on understanding the drivers of EI in general through its analysis of student intention for entrepreneurship. Moreover, this research differs from previous studies in that it provides an overview of factors affecting SEI that were gathered into sets of antecedents according to empirically grounded evidence. Thus, the evolution over time of the literature on SEI was analysed (see Figure 2) by highlighting the current research on the factors that most affect SEI (see Figure 3). Essentially, the variety of factors that emerged from the analysis confirms the complex nature of entrepreneurship (Douglas et al., 2020).

Overall, the present study contributes to the current debate in six primary ways. First, the study's results highlight that not only are the personal characteristics of potential entrepreneurs relevant, but cultural, educational, institutional and political, as well as social perspectives are also taken into account through various contextual/situational factors. Yet the factors related to personality traits and the context or situation have received considerable attention, whereas the factors related to personal background are underdeveloped.

Second, unlike Al-Harrasi et al.'s (2014) research, which focused fundamentally on management engineering studies, motivational factors did not emerge in the entrepreneurship and management literature that was examined in this study. More precisely, factors such as the determination to succeed, need for more income, desire for security and desire for status were not considered antecedents of SEI.

Third, this research highlights the different factors affecting SEI that have been combined in specific analyses. These factors are the result of the application of models resulting in the incidence of each factor. Given that some results appear to be contradictory, agreement regarding certain factors is lacking in the academic literature. For example, Al-Mamary et al. (2020) argue that innovativeness negatively affects SEI, whereas other scholars (Ahmed et al., 2019; Ladd et al., 2019; López-Delgado et al., 2019; Mamun et al., 2017) argue differently. Consequently, more empirical evidence is necessary, and this opens up opportunities for future studies.

Fourth, as demonstrated during the analysis, not all antecedents of the various sets identified have been used with the same frequency: attitude towards entrepreneurship, perceived behavioural control and subjective norms have been used more than other antecedents. This result is closely related to the almost exclusive use of the TPB model in research about SEI. The large number of studies adopting the TPB model has increased understanding of the role played by this model in the entrepreneurship context

and, at the same time, reinforces the TPB as an appropriate theoretical construct to measure SEI.

Fifth, although research on SEI antecedents suggests that the three factors proposed by the TPB model are the most used in literature, this study highlights which other factors have been considered in the literature and how studies have empirically tested them. For example, innovativeness, need for achievement, risk-taking propensity, gender and family background appear most commonly in the literature and are not included in the TPB model. Moreover, in some cases, scholars have used these factors along with the factors included in the TPB model. In addition, this study shows what other theoretical approaches such as the entrepreneurial event model and social cognitive theory have been used in the past 15 years of examination of this topic. This view is essential for scholars who aim to start new research models based on these studies.

Sixth, the present overview also reveals that the factors identified can be used by lecturers, educators, higher education institutions and policymakers as a preliminary checklist to stimulate students' intention towards entrepreneurship and to plan effective training programmes. More precisely, this analysis reveals that the entrepreneurship education factor, in particular, has been used in previous studies. This aspect reflects the importance of lecturers and educators finding more suitable teaching methods to increase positive intention towards entrepreneurship among students. According to Ishiguro's (2015) study, the ability to create ideas and put them into action is the most significant factor influencing students' entrepreneurial mindset. Indeed, previous studies suggest that courses should be more practical, experientially engage students, involve increased time and effort in teaching entrepreneurial knowledge and tools to students, equip students with entrepreneurial skills, invite successful entrepreneurs to the lectures, enable students to experience interaction with actual local entrepreneurs to share their successes, and involve students in business games and challenges. In this way, students will keep alive their EIs, aspirations, motivations and desires during their university studies instead of allowing them to deteriorate. These aspects outline that entrepreneurship education is not only content-based, but can also inspire and motivate students (Souitaris et al., 2007). This means not only the nurturing of entrepreneurial mindsets but also the creation of emotional experiences. Emotions can offer motivational reasons to become an entrepreneur and to plan for new ventures. Thus, emotions together with attitudinal and motivational factors, could influence the interest and intention to become an entrepreneur (Ustav and Venesaar, 2018). In other terms, emotions are found in literature to play a crucial role on entrepreneurial behaviour (Fordon and Pintea, 2017; Fayolle, 2013; Lundmark and Westelius, 2014) because entrepreneurs are very emotionally committed to their ventures (Shepherd et al.,

2015). More precisely, recent research argues that emotions are highly related to action (Blakemore and Vuilleumier, 2017), decision-making (Welpe et al., 2012), opportunity recognition (Hayton and Cholakova, 2012), and memory (Bower, 1992; Tyng et al., 2017). Precisely, scholars acknowledge the importance of emotions (Arpiainen et al., 2013; Jones and Underwood, 2017; Lackéus, 2014) in entrepreneurship education, concretely in the teaching and learning of entrepreneurship (Pless et al., 2011) and the development of entrepreneurial competencies (Lackéus, 2014). According to Fernandez-Perez et al. (2019), emotional competencies help students manage emotions and recognize them when needed in entrepreneurship. The role of emotions in entrepreneurship education can be significant for the participating students.

Study programs and a supportive environment within a university can influence students' engagement in entrepreneurial activities in the future. From an entrepreneurship education perspective, more studies have highlighted that a better university environment, based on the quality of education towards entrepreneurship, leads to higher chances of positive SEI. In other words, higher education institutions can encourage SEI to start a business through entrepreneurship education, given the findings that reveal a positive—and often significant association—among study courses and programs, university environment and intention to start a business among students.

Further, understanding the factors of SEI is important for policymakers in developing effective educational policies and programs aimed at increasing institutions' fostering of a positive business environment, facilitating the creation of new ventures, offering funding to create spinoffs and reinforcing the benefits of becoming a student entrepreneur. These findings highlight the importance of applying the triple helix model involving the university, government and business (Feola et al., 2019). Notably, the concept of entrepreneurial university, a key concept in the triple helix model developed by Etzkowitz, identifies the evolution of the university role with the addition to the traditional missions of university (education and research) of a third mission that is to contribute to the economic development through the transfer of research results from the laboratory to the economic system.

Focused on the entrepreneurial idea, the entrepreneurial university try to work as education centers that promote entrepreneurial attitudes, in addition to working as business incubators, spin-offs providing students with new ideas, competencies and ability to think in an entrepreneurial way when facing social demands together with to build connections with industries(Etzkowitz et al., 2000). By harmonising their aims, these institutions can encourage students to develop their EI and engage them in start-up activities.

6. Conclusions: future research streams

The review of literature debate about SEI highlights the possible future research streams on this topic. In other words, in addition to identifying and organising the antecedents of SEI, this overview aims to provide a base for future research by suggesting possible research directions to stimulate further theoretical and empirical studies that can advance both the theoretical basis and the practice of SE and, especially, SEI.

Although many SEI predictors have been identified, many factors related to the three sets of antecedents have been scarcely used, such as age, national culture, legal institution, business support and networking. Future studies could further examine their impact on SEI to understand whether they can influence students' intention for entrepreneurship in addition to exploring the relationship (and the possible interplay) between these personal aspects and other antecedents. Additionally, the factors that emerged from the analysis in this study are not exhaustive in nature. Future studies could seek new factors influencing students' intention for entrepreneurship to further complement the TPB and other models used in literature. For example, future studies could investigate personal motivation, informal environments and digital transformation as possible antecedents of SEI. With respect to the dynamic business environment, further studies could study whether and how the digital economy fosters entrepreneurial traits among students and thus identify possible factors influencing SEI.

Further, to develop social and sustainable entrepreneurship, exploring the specific factors that foster this specific entrepreneurial intention is recommended. For example, empirical research could focus on the nexus between participation in environmental youth movements or volunteer experiences that require mutual help.

There is a need to study SEI antecedents in different countries by conducting a cross-country comparative study. Personality traits, contextual/situational factors, and factors related to personal background can vary, and different results could emerge. Previous studies have not included other variables such as individual cultural values. Also, performing a cross-cultural comparison through further empirical evidence is necessary to add fresh insight to the ongoing debate over EI antecedents.

Moreover, very few studies have combined the TPB with the entrepreneurial event model (Jang et al., 2019; Omidi Najafabadi et al., 2016) or with the SCT (Al-Jubari et al., 2019). Future research could further examine the relationships between these models by highlighting which specific factors can be more effectively combined.

This research does not examine the moderating and mediating role on the relationships between different antecedents of SEI. Future papers could examine the particular effect of personality, contextual and personal background antecedents in predicting SEI. It is also important to recognise that although major efforts have been made to guarantee intersubjective verification of results by applying systematic research synthesis methods, this procedure has some inherent limitations linked to the selection of articles included in the research synthesis. It must be acknowledged that selecting only peer-reviewed articles published in academic journals generates a problem of confinement because it excludes some potential literature regardless of its contribution to the discussion addressed. Another reason for confinement is the language of the sources included in the systematic research. The decision to restrict the literature review to English articles could also influence the outcomes of the research synthesis, even if the number of articles written in English regarding SEI is arguably higher than that of articles published in other languages.

Finally, it would be interesting to examine the possible negative effect of certain educational experiences on SEI. For example, future research could investigate whether certain didactical methods or content inhibit SEI.

References

Adekiya, A. A., & Ibrahim, F. (2016). Entrepreneurship intention among students. the antecedent role of culture and entrepreneurship training and development. *International Journal of Management Education*, 14(2), 116-132. doi:10.1016/j.ijm e.2016.03.001

Ahmad, N. H., Ramayah, T., Mahmud, I., Musa, M., & Anika, J. J. (2019). Entrepreneurship as a preferred career option: Modelling tourism students' entrepreneurial intention. *Education and Training*, 61(9), 1151-1169. doi:10.1108/ET-12-2018-0269

Ahmed, T., Klobas, J. E., & Ramayah, T. (2019). Personality traits, demographic factors and entrepreneurial intentions: Improved understanding from a moderated mediation study. *Entrepreneurship Research Journal*, doi:10.1515/erj-2017-0062

Ahmed, T., Chandran, V. G. R., Klobas, J. E., Liñán, F., & Kokkalis, P. (2020). Entrepreneurship education programmes: How learning, inspiration and resources affect intentions for new venture creation in a developing economy. *International Journal of Management Education*, 18(1) doi:10.1016/j.ijme.2019.100327

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.

Alayis, M. M. H., Abdelwahed, N. A. A., & Atteya, N. (2018). Impact of social networking sites' use on entrepreneurial intention among undergraduate business students: The case of saudi arabia. *Journal of Legal, Ethical and Regulatory Issues*, 22(4), 1-18.

Al-Harrasi, A.S., Al-Zadjali, E.B., Al-Salti, Z.S. (2014). Factors impacting entrepreneurial intention: A literature review. World Academy of Science, *Engineering and Technology International Journal of Economics and Management Engineering*, 8(8), 2487-2490.

Ali, T. B. (2016). Explaining the intent to start a business among saudi arabian university students. *International Review of Management and Marketing*, 6(2), 345-353.

Al-Jubari, I., Hassan, A., & Liñán, F. (2019). Entrepreneurial intention among university students in malaysia: Integrating self-determination theory and the theory of planned behavior. *International Entrepreneurship and Management Journal*, 15(4), 1323-1342. doi:10.1007/s11365-018-0529-0

Al-Mamary, Y. H. S., Abdulrab, M., Alwaheeb, M. A., & Alshammari, N. G. M. (2020). Factors impacting entrepreneurial intentions among university students in saudi arabia: Testing an integrated model of TPB and EO. *Education and Training*, 62(7-8), 779-803. doi:10.1108/ET-04-2020-0096

Aloulou, W. J. (2016). Predicting entrepreneurial intentions of final year saudi university business students by applying the theory of planned behavior. *Journal of Small Business and Enterprise Development*, 23(4), 1142-1164. doi:10.1108/JSBED-02-2016-0028

Anwar, I., Saleem, I., Islam, K. M. B., Thoudam, P., & Khan, R. (2020). Entrepreneurial intention among female university students: Examining the moderating role of entrepreneurial education. *Journal for International Business and Entrepreneurship Development*, 12(4), 217-234. doi:10.1504/JIBED.2020.110254

Arpiainen, R.-L., Täks, M., Tynjälä, P., & Lackéus, M. (2013). The sources and dynamics of emotions in entrepreneurship education learning process. *Trames*-journal of The Humanities and Social Sciences, 17(4), 331–346. doi:10.3176/TR.2013.4.02.

Arrighetti, A., Caricati, L., Landini, F., & Monacelli, N. (2016). Entrepreneurial intention in the time of crisis: A field study. *International Journal of Entrepreneurial Behaviour and Research*, 22(6), 835-859. doi:10.1108/IJEBR-12-2015-0326

Åstebro, T., Bazzazian, N., & Braguinsky, S. (2012). Startups by recent university graduates and their faculty: Implications for university entrepreneurship policy. *Research Policy*, 41(4), 663-677. doi:10.1016/j.respol.2012.01.004

Badri, R., & Hachicha, N. (2019). Entrepreneurship education and its impact on students' intention to start up: A sample case study of students from two tunisian universities. *International Journal of Management Education*, 17(2), 182-190. doi:10.1016/j.ijme.2019.02.004

Bandura, A. (1988). Organisational applications of social cognitive theory. *Australian Journal of Management*, 13(2), 275-302. doi:10.1177/031289628801300210

Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175-1184. doi:10.1037/0003-066X.44.9.1175

Bazzy, J. D., Smith, A. R., & Harrison, T. (2019). The impact of abstract thinking on entrepreneurial intentions. *International Journal of Entrepreneurial Behaviour and Research*, 25(2), 323-337. doi:10.1108/IJEBR-03-2018-0128

Bergmann, H., Hundt, C., & Sternberg, R. (2016). What makes student entrepreneurs? on the relevance (and irrelevance) of the university and the regional context for student start-ups. *Small Business Economics*, 47(1), 53-76. doi:10.1007/s11187-016-9700-6

Blakemore, R. L., & Vuilleumier, P. (2017). An emotional call to action: Integrating affective neuroscience in models of motor control. *Emotion Review*, 9(4), 299–309. doi:10.1177/1754073916670020.

Bower, G. H. (1992). How might emotions affect learning. In S.-A. Christianson (Ed.), *The handbook of emotion and memory: Research and theory*, 3–31. Hillsdale, NJ: Lawrence Erlbaum Associates.

Brioschi, M.S., Cassia, L., Hahn, D., & Pressiani, P. (2014). Gli imprenditori del futuro: intenzioni e attività imprenditoriali degli studenti universitari. *Sistemi & Impresa*, 9, 60-65.

Brioschi, M.S., Minola, T., & Hahn, D. (2019/2020). Imprenditorialità studentesca. Un fenomeno in forte crescita. *Sistemi & Impresa*, 8, 63-68.

Canever, M. D., Barral, M. R. M., & Ribeiro, F. G. (2017). How does the public and private university environment affect students' entrepreneurial intention? *Education and Training*, 59(6), 550-564. doi:10.1108/ET-12-2016-0187

Caro-González, F. -., Romero-Benabent, H., & Sánchez-Torné, I. (2017). The influence of gender on the entrepreneurial intentions of journalism students. *Intangible Capital*, 13(2), 430-478. doi:10.3926/ic.927

Çera, G., Çera, E., Rozsa, Z., & Bilan, S. (2020). Entrepreneurial intention as a function of university atmosphere, macroeconomic environment and business support: A multi-group analysis. *European Journal of Training and Development*, doi:10.1108/EJTD-08-2019-0148

Colombo, M. G., Dagnino, G. B., Lehmann E. E., & Salmador, M. P. (2017). The governance of entrepreneurial ecosystems. *Small Business Economics*, 52, 419-428.

Cooper, H. (2016). Research Synthesis and Meta-analysis: A Step-by-Step Approach, 5th Edition. Sage Publications.

Crant, J. M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34(3), 42-49.

Daniel, A. D., & Almeida, J. (2020). The role of junior enterprises in the development of students' entrepreneurial skills. *Education and Training*, doi:10.1108/ET-03-2019-0049

Giudice, M. D., Peruta, M. R. D., & Scuotto, V. (2014). Student entrepreneurship, creativity and success. how much does knowledge heterogeneity really matter? *International Journal of Entrepreneurship and Innovation Management*, 18(1), 45-58. doi:10.1504/IJEIM.2014.062789

Devonish, D., Alleyne, P., Charles-Soverall, W., Marshall, A. Y., & Pounder, P. (2010). Explaining entrepreneurial intentions in the caribbean. International *Journal of Entrepreneurial Behaviour and Research*, 16(2), 149-171. doi:10.1108/13552551011027020

Díez-Echavarría, L., Arias, A. V., Bermúdez-Hernández, J., Pérez, F. O. M., Marín, M. L. U., & Velásquez, J. A. T. (2019). Extension of the systemic entrepreneurship intention model in university students. *Serbian Journal of Management*, 14(2), 277-297. doi:10.5937/sjm14-17336

Doan, X. T., & Phan, T. T. H. (2020). The impact of entrepreneurial education on entrepreneurial intention: The case of vietnamese. *Management Science Letters*, 10(8), 1787-1796. doi:10.5267/j.msl.2019.12.040

Doanh, D. C., & van Munawar, T. (2019). Entrepreneurial self-efficacy and intention among vietnamese students: A meta-analytic path analysis based on the theory of planned behaviour. *Management Science Letters*, 9(11), 1847-1862. doi:10.5267/j.msl.2019.6.007

- Douglas, E. J., & Shepherd, D. (2002). Exploring investor readiness: Assessments by entrepreneurs and investors in australia. *Venture Capital*, 4(3), 219-236. doi:10.1080/13691060213713
- Douglas, E. J., Shepherd, D. A., & Prentice, C. (2020). Using fuzzy-set qualitative comparative analysis for a finer-grained understanding of entrepreneurship. *Journal of Business Venturing*, 35(1) doi:10.1016/j.jbusvent.2019.105970
- Duong, C. D., Nguyen, H. X., Ngo, T. V. N., Nguyen, V. H., & Nguyen, T. P. L. (2020). The impact of individual and environmental characteristics on students' entrepreneurial intention. *Management Science Letters*, 10(3), 599-608. doi:10.5267/j.msl.2019.9.020
- Echchabi, A., Omar, M. M. S., & Ayedh, A. M. (2020). Entrepreneurial intention among female university students in oman. *Journal for International Business and Entrepreneurship Development*, 12(4), 280-297. doi:10.1504/JIBED.2020.110251
- Ephrem, A. N., Namatovu, R., & Basalirwa, E. M. (2019). Perceived social norms, psychological capital and entrepreneurial intention among undergraduate students in bukavu. *Education and Training*, 61(7-8), 963-983. doi:10.1108/ET-10-2018-0212
- Etzkowitz, H., Webster, A., Gebhardt, C., Brance, R., & Cantisano, T. (2000). The future of the University and the University of the future: Evolution of ivory tower to entrepreneurial paradigm. *Research Policy*, 29(2), 313-330. doi:10.1016/S0048-7333(99)00069-4.
- Farhat, S. D., & Moncada, R. G. (2020). Incidence of the behavioral attitude in the entrepreneurial intentions in undergraduate students. *Contaduria y Administracion*, 65(2) doi:10.22201/fca.24488410e.2020.2074
- Fasone V., Puglisi M. (2019). Entrepreneur and risk: a systematic literature review with a focus on small business, *Piccola Impresa | Small Business*, 2, 35-55.
- Fayolle, A. (2013). Personal views on the future of entrepreneurship education. *Entrepreneurship & Regional Development: An International Journal*, 25(7-8), 692-701. doi:10.10 80/08985626.2013.821318.
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75-93. doi:10.1111/jsbm.12065
- Feola, R., Vesci, M., Botti, A., & Parente, R. (2019). The determinants of entrepreneurial intention of young researchers: Combining the theory of planned behavior with the triple helix model. *Journal of Small Business Management*, 57(4), 1424-1443. doi:10.1111/jsbm.12361
- Fernández-Pérez, V., Montes-Merino, A., Rodríguez-Ariza, L., & Galicia, P. E. A. (2019). Emotional competencies and cognitive antecedents in shaping student's entrepreneurial intention: The moderating role of entrepreneurship education. *International Entrepreneurship and Management Journal*, 15(1), 281–305. doi:10.1007/s11365-017-0438-7.
- Fietze, S., & Boyd, B. (2017). Entrepreneurial intention of danish students: A correspondence analysis. *International Journal of Entrepreneurial Behaviour and Research*, 23(4), 656-672. doi:10.1108/IJEBR-08-2016-0241
- Filion, L. (1999). Empreendedorismo: empreendedores e proprietários-gerentes de pequenos negócios. *Revista Administração*, 34(2), 5-28.
- Fishbein, M. & Ajzen, I., (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- Fodor, O. C., & Pintea, S. (2017). The 'emotional side' of entrepreneurship: A meta-analysis of the relation between positive and negative affect and entrepreneurial performance. *Frontiers in Psychology*, 8(310), 1-16. doi:10.3389/fpsyg.2017.00310.
- Fragoso, R., Rocha-Junior, W., & Xavier, A. (2020). Determinant factors of entrepreneurial intention among university students in brazil and portugal. *Journal of Small Business and Entrepreneurship*, 32(1), 33-57. doi:10.1080/08276331.2018.1551459
- Galvão, A., Marques, C. S., & Marques, C. P. (2018). Antecedents of entrepreneurial intentions among students in vocational training programmes. *Education and Training*, 60(7-8), 719-734. doi:10.1108/ET-03-2017-0034
 - García-Rodríguez, F. J., Gutiérrez-Taño, D., & Ruiz-Rosa, I. (2018). Analysis of the

potential of entrepreneurship education in young children. *Entrepreneurship Research Journal*, 9(1) doi:10.1515/erj-2017-0064

Gelaidan, H. M., & Abdullateef, A. O. (2017). Entrepreneurial intentions of business students in malaysia: The role of self-confidence, educational and relation support. *Journal of Small Business and Enterprise Development*, 24(1), 54-67. doi:10.1108/JSBED-06-2016-0078

Guerrero, M., Rialp, J., & Urbano, D. (2008). The impact of desirability and feasibility on entrepreneurial intentions: A structural equation model. *International Entrepreneurship and Management Journal*, 4(1), 35-50. doi:10.1007/s11365-006-0032-x

Gupta, A., & Gupta, V.K. (2017). Just a Lemonade Stand: An Introduction to Student Entrepreneurship. *New England Journal of Entrepreneurship*, 20(1), 33-44.

Hassan, A., Saleem, I., Anwar, I., & Hussain, S. A. (2020). Entrepreneurial intention of indian university students: The role of opportunity recognition and entrepreneurship education. *Education and Training*, 62(7-8), 843-861. doi:10.1108/ET-02-2020-0033

Hayton, J. C., & Cholakova, M. (2012). The role of affect in the creation and intentional pursuit of entrepreneurial ideas. *Entrepreneurship Theory and Practice*, 36(1), 41–67. doi:10.1111/j.1540-6520.2011.00458.x.

Henley, A., Contreras, F., Espinosa, J. C., & Barbosa, D. (2017). Entrepreneurial intentions of colombian business students: Planned behaviour, leadership skills and social capital. *International Journal of Entrepreneurial Behaviour and Research*, 23(6), 1017-1032. doi:10.1108/IIEBR-01-2017-0031

Iakovleva, T., & Kolvereid, L. (2009). An integrated model of entrepreneurial intentions. *International Journal of Business and Globalisation*, 3(1), 66-80. doi:10.1504/IJBG.2009.021632

Iglesias-Sánchez, P. P., Jambrino-Maldonado, C., Velasco, A. P., & Kokash, H. (2016). Impact of entrepreneurship programmes on university students. *Education and Training*, 58(2), 209-228. doi:10.1108/ET-01-2015-0004

Isada, F., Lin, H.-., & Isada, Y. (2015). Entrepreneurship of university students in taiwan and japan. *Management Research Review*, 38(12), 1251-1266. doi:10.1108/MRR-06-2014-0131

Ishiguro, J. (2015). What influences entrepreneurial career choice?: An exploratory analysis of the sally caird's get2 for japanese high school students. *Academy of Entrepreneurship Journal*, 21(1), 44-57.

Isiwu, P. I., & Onwuka, I. (2017). Psychological factors that influences entrepreneurial intention among women in nigeria: A study based in south east nigeria. *Journal of Entrepreneurship*, 26(2), 176-195. doi:10.1177/0971355717708846

Iwu, C. G., Opute, P. A., Nchu, R., Eresia-Eke, C., Tengeh, R. K., Jaiyeoba, O., & Aliyu, O. A. (2019). Entrepreneurship education, curriculum and lecturer-competency as antecedents of student entrepreneurial intention. *International Journal of Management Education*, 19(1) doi:10.1016/j.ijme.2019.03.007

Jang, Y., Hadley, B., Son, J., & Song, C. (2019). Determinants of students' entrepreneurial intention to compete in a fast-pitch competition. *Journal of Education for Business*, 94(6), 359-368. doi:10.1080/08832323.2018.1540389

Jansen, S., van de Zande, T., Brinkkemper, S., Stam, E., & Varma, V. (2015). How education, stimulation, and incubation encourage student entrepreneurship: Observations from MIT, IIIT, and utrecht university. *International Journal of Management Education*, 13(2), 170-181. doi:10.1016/j.ijme.2015.03.001

Jones, S., & Underwood, S. (2017). Understanding students' emotional reactions to entrepreneurship education: A conceptual framework. *Education* + *Training*, 59(7/8), 657–671. doi:10.1108/ET-07-2016-0128.

Kakouris, A. (2016). Exploring entrepreneurial conceptions, beliefs and intentions of greek graduates. *International Journal of Entrepreneurial Behaviour and Research*, 22(1), 109-132. doi:10.1108/IJEBR-07-2014-0137

Khalifa, A. H., & Dhiaf, M. M. (2016). The impact of entrepreneurship education on entrepreneurial intention: The uae context. *Polish Journal of Management Studies*, 14(1), 119-128. doi:10.17512/pjms.2016.14.1.11

- Krueger Jr., N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411-432. doi:10.1016/S0883-9026(98)00033-0
- Ladd, T., Hind, P., & Lawrence, J. (2019). Entrepreneurial orientation, waynesian self-efficacy for searching and marshaling, and intention across gender and region of origin. *Journal of Small Business and Entrepreneurship*, 31(5), 391-411. doi:10.1080/08276331.2018.14 59016
- Lackéus, M. (2014). An emotion-based approach to assessing entrepreneurial education. *The International Journal of Management Education*, 12(3), 374–396. doi:10.1016/j. ijme.2014.06.005.
- Le Trung, T., Xuan, H. D., Ngoc, H. N., Cong, D. D., & Phuong, L. N. T. (2020). A comparative analysis of entrepreneurial intention and migration attitudes of students in vietnam and poland. *Management Science Letters*, 10(2), 479-488. doi:10.5267/j.msl.2019.8.022
- Lee, L., Wong, P. K., Foo, M. D., & Leung, A. (2011). Entrepreneurial intentions: The influence of organizational and individual factors. *Journal of Business Venturing*, 26(1), 124-136. doi:10.1016/j.jbusvent.2009.04.003
- Leonelli, S., Ceci, F., & Masciarelli, F. (2016). The importance of entrepreneurs' traits in explaining start-ups' innovativeness. *Sinergie Italian Journal of Management*, 34(101), 71-85. doi: 10.7433/s101.2016.05.
- Liñán, F. (2008). Skill and value perceptions: How do they affect entrepreneurial intentions? *International Entrepreneurship and Management Journal*, 4(3), 257-272. doi:10.1007/s11365-008-0093-0
- Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, 11(4), 907-933. doi:10.1007/s11365-015-0356-5
- Liñán, F., Nabi, G., & Kueger, N. (2013). British and spanish entrepreneurial intentions: A comparative study. *Revista De Economia Mundial*, (33), 73-103.
- Longva, K. K., Strand, Ø., & Pasquine, M. (2020). Entrepreneurship education as an arena for career reflection: The shift of students' career preferences after a business planning course. *Education and Training*, 62(7-8), 877-896. doi:10.1108/ET-08-2019-0187
- Looi, K. H. (2017). Predicting undergraduates' entrepreneurial intentions: A values approach. *International Journal of Business and Globalisation*, 19(3), 331-349. doi:10.1504/IJBG.2017.087206
- Lopez, T., & Alvarez, C. (2019). Influence of university-related factors on students' entrepreneurial intentions. *International Journal of Entrepreneurial Venturing*, 11(6), 521-540. doi:10.1504/IJEV.2019.103751
- López-Delgado, P., Iglesias-Sánchez, P. P., & Jambrino-Maldonado, C. (2019). Gender and university degree: A new analysis of entrepreneurial intention. *Education and Training*, 61(7-8), 797-814. doi:10.1108/ET-04-2018-0085
- Lundmark, E. & Westelius, A. (2014). Entrepreneurship as elixir and mutagen. *Entrepreneurship: Theory & Practice*, 38(3), 575-600. doi:10.1111/etap.12004.
- Mamun, A. A., Nawi, N. B. C., Mohiuddin, M., Shamsudin, S. F. F. B., & Fazal, S. A. (2017). Entrepreneurial intention and startup preparation: A study among business students in malaysia. *Journal of Education for Business*, 92(6), 296-314. doi:10.1080/08832323.2017.136 5682
- Marchand, J., & Hermens, A. (2015). Student entrepreneurship: A research agenda. *International Journal of Organizational Innovation*, 8(2), 266-281.
- Mars, M. M., Slaughter, S., & Rhoades, G. (2008). The state-sponsored student entrepreneur. *Journal of Higher Education*, 79(6), 638-670. doi:10.1353/jhe.0.0024
- Martins, I., & Perez, J. P. (2020). Testing mediating effects of individual entrepreneurial orientation on the relation between close environmental factors and entrepreneurial intention. *International Journal of Entrepreneurial Behaviour and Research*, 26(4), 771-791. doi:10.1108/IJEBR-08-2019-0505

Meoli, A., Fini, R., Sobrero, M., & Wiklund, J. (2020). How entrepreneurial intentions influence entrepreneurial career choices: The moderating influence of social context. *Journal of Business Venturing*, 35(3) doi:10.1016/j.jbusvent.2019.105982

Monllor, J., & Soto-Simeone, A. (2019). The impact that exposure to digital fabrication technology has on student entrepreneurial intentions. *International Journal of Entrepreneurial Behaviour and Research*, 26(7), 1505-1523. doi:10.1108/IJEBR-04-2019-0201

Morales-Alonso, G., Pablo-Lerchundi, I., & Vargas-Perez, A. M. (2016). An empirical study on the antecedents of knowledge intensive entrepreneurship. *International Journal of Innovation and Technology Management*, 13(5) doi:10.1142/S0219877016400113

Nabi, G., Holden, R., & Walmsley, A. (2006). Graduate career-making and business startup: Aliterature review. *Education and Training*, 48(5), 373-385. doi:10.1108/00400910610677072

Nasser Al Muniri, K. S., Hashim, M. W., & Al Aliyani, W. R. (2019). The impact of undergraduate entrepreneurship education on entrepreneurial intentions: An oman perspective. *International Journal of Organizational Diversity*, 19(2), 41-51. doi:10.18848/2328-6261/CGP/v19i02/41-51

Okręglicka, M., Havierniková, K., Mynarzová, M., & Lemańska-Majdzik, A. (2017). Entrepreneurial intention creation of students in poland, slovakia and czechia. *Polish Journal of Management Studies*, 15(2), 162-172. doi:10.17512/pjms.2017.15.2.15

Omidi Najafabadi, M., Zamani, M., & Mirdamadi, M. (2016). Designing a model for entrepreneurial intentions of agricultural students. *Journal of Education for Business*, 91(6), 338-346. doi:10.1080/08832323.2016.1218318

Opoku-Antwi, G. L., Amofah, K., Nyamaah-Koffuor, K. & Yakubu, A., (2012). Entrepreneurial Intention among Senior High School Students in the Sunyani Municipality. *International Review of Management and Marketing*, 2(4), 210-219.

Paiva, L. E. B., Sousa, E. S., Lima, T. C. B., & Da Silva, D. (2020). Planned behavior and religious beliefs as antecedents to entrepreneurial intention: A study with university students. *Revista De Administracao Mackenzie*, 21(2) doi:10.1590/1678-6971/eRAMG200022

Palalic, R., Durakovic, B., Brankovic, A., & Ridic, O. (2016). Students' entrepreneurial orientation intention, business environment and networking: Insights from bosnia and herzegovina. *International Journal of Foresight and Innovation Policy*, 11(4), 240-255. doi:10.1504/IJFIP.2016.084530

Palmer, C., Fasbender, U., Kraus, S., Birkner, S., & Kailer, N. (2021). A chip off the old block? the role of dominance and parental entrepreneurship for entrepreneurial intention. *Review of Managerial Science*, 15(2), 287-307. doi:10.1007/s11846-019-00342-7

Pérez-Fernández, H., Martín-Cruz, N., Delgado-García, J. B., & Rodríguez-Escudero, A. I. (2020). Online and face-to-face social networks and dispositional affectivity. how to promote entrepreneurial intention in higher education environments to achieve disruptive innovations? *Frontiers in Psychology*, 11 doi:10.3389/fpsyg.2020.588634

Phuc, P. T., Vinh, N. Q., & Do, Q. H. (2020). Factors affecting entrepreneurial intention among tourism undergraduate students in vietnam. *Management Science Letters*, 10(15), 3675-3682. doi:10.5267/j.msl.2020.6.026

Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (2016). Entrepreneurship education and entry into self-employment among university graduates. *World Development*, 77, 311-327. doi:10.1016/j.worlddev.2015.08.028

Rajković, J., Nikolić, M., Ćoćkalo, D., Stojanović, E. T., & Kovačić, S. (2020). National culture and the entrepreneurial intentions of students in serbia*. *Journal of East European Management Studies*, 25(1), 105-141. doi:10.5771/0949-6181-2020-1-105

Ramos-Rodríguez, A. R., Medina-Garrido, J. A., & Ruiz-Navarro, J. (2019). Why not now? intended timing in entrepreneurial intentions. *International Entrepreneurship and Management Journal*, 15(4), 1221-1246. doi:10.1007/s11365-019-00586-5

Rippa, P., Ferruzzi, G., Holienka, M., Capaldo, G., & Coduras, A. (2020). What drives university engineering students to become entrepreneurs? finding different recipes using a configuration approach. *Journal of Small Business Management*, doi:10.1080/00472778.202 0.1790291

- Rodrigues, A. P., Jorge, F. E., Pires, C. A., & António, P. (2019). The contribution of emotional intelligence and spirituality in understanding creativity and entrepreneurial intention of higher education students. *Education and Training*, 61(7-8), 870-894. doi:10.1108/ET-01-2018-0026
- Roy, R., Akhtar, F., & Das, N. (2017). Entrepreneurial intention among science & technology students in india: Extending the theory of planned behavior. *International Entrepreneurship and Management Journal*, 13(4), 1013-1041. doi:10.1007/s11365-017-0434-y

Saldaña, J. (2015). The coding manual for qualitative researchers. SAGE: Los Angeles.

Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A metaanalytic test and integration of competing models. *Entrepreneurship: Theory and Practice*, 38(2), 291-332. doi:10.1111/etap.12087

Shah, N., & Soomro, B. A. (2017). Investigating entrepreneurial intention among public sector university students of pakistan. *Education and Training*, 59(7-8), 841-855. doi:10.1108/ET-11-2016-0168

Shahab, Y., Chengang, Y., Arbizu, A. D., & Haider, M. J. (2019). Entrepreneurial self-efficacy and intention: Do entrepreneurial creativity and education matter? *International Journal of Entrepreneurial Behaviour and Research*, 25(2), 259-280. doi:10.1108/IJEBR-12-2017-0522

Shapero, A., & Sokol, L. (1982). Social dimensions of entrepreneurship. In C. A. Kent, D. L. Sexton, & K. H. Vesper (Eds.), *Encyclopedia of entrepreneurship* (pp. 72–90). Englewood Cliffs: Prentice Hall.

Sharma, S. K. (2019). Entrepreneurial intention of students: A case of NIT hamirpur (HP, india). *International Journal of Business and Globalisation*, 22(3), 316-331. doi:10.1504/IIBG.2019.099297

Shepherd, D. A., Williams, T. A., & Patzelt, H. (2015). Thinking About Entrepreneurial Decision Making: Review and Research Agenda. *Journal of Management*, 41(1), 11-46. doi:10.1177/0149206314541153.

Shirokova, G., Osiyevskyy, O., Bogatyreva, K., Edelman, L. F., & Manolova, T. S. (2020). Moving from intentions to actions in youth entrepreneurship: An institutional perspective. *Entrepreneurship Research Journal*, doi:10.1515/erj-2019-0201

Soria, K., Honores, G., & Gutiérrez, J. (2016). Gender and social legitimacy of entrepreneurship: Contribution to entrepreneurial intention in university students from chile and colombia. *Journal of Technology Management and Innovation*, 11(3), 67-76. doi:10.4067/S0718-27242016000300008

Soria-Barreto, K., Honores-Marin, G., Gutiérrez-Zepeda, P., & Gutiérrez-Rodríguez, J. (2017). Prior exposure and educational environment towards entrepreneurial intention. *Journal of Technology Management and Innovation*, 12(2), 45-58. doi:10.4067/S0718-27242017000200006

Souitaris, V., Zerbinati, S. & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566-591. doi:10.1016/j.jbusvent.2006.05.002.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207-222. doi:10.1111/1467-8551.00375

Trivedi, R. (2016). Does university play significant role in shaping entrepreneurial intention? A cross-country comparative analysis. *Journal of Small Business and Enterprise Development*, 23(3), 790-811. doi:10.1108/JSBED-10-2015-0149

Trivedi, R. H. (2017). Entrepreneurial-intention constraint model: A comparative analysis among post-graduate management students in India, Singapore and Malaysia. *International Entrepreneurship and Management Journal*, 13(4), 1239-1261.

Turker, D., & Selcuk, S. S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training*, 33(2), 142-159. doi:10.1108/03090590910939049

Tyng, C. M., Amin, H. U., Saad, M. N., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in Psychology*, 8(1454), 1-22. doi:10.3389/fpsyg.2017.01454.

Uddin, M. R., & Bose, T. K., (2012). Determinants of entrepreneurial intention of business students in Bangladesh. *International Journal of Business and Management*, 7(24), 128-137.

Ustav, S. & Venesaar, U. (2018). Bridging metacompetencies and entrepreneurship education. *Education* + *Training*, 60(7-8), 674-695. doi:10.1108/ET-08-2017-0117.

Valencia-Arias, A., & Restrepo, L. A. M. (2020). Entrepreneurial intentions among engineering students: Applying a theory of planned behavior perspective. *Periodica Polytechnica Social and Management Sciences*, 28(1), 59-69. doi:10.3311/PPso.12731

Van Trang, T., & Doanh, D. C. (2019). The role of structural support in predicting entrepreneurial intention: Insights from vietnam. *Management Science Letters*, 9(11), 1783-1798. doi:10.5267/j.msl.2019.6.012

Van Trang, T., Do, Q. H., & Loan, N. T. B. (2020). Relationships between students' work values and entrepreneurial intention among vietnamese students. *Academy of Entrepreneurship Journal*, 26(1), 1-13. Retrieved from www.scopus.com

Varamäki, E., Joensuu, S., & Viljamaa, A. (2016). Starting up a firm or not: Differences in the antecedents of entrepreneurial intentions. *Industry and Higher Education*, 30(3), 239-249. doi:10.1177/0950422216655046

Varghese, T., & Hassan, A., (2012). Youth's Entrepreneurial Attitudes in Oman, World Journal of Social Sciences, 2(7), 302-325.

Volkmann, C. (2004) Entrepreneurial studies in higher education, *Higher Education in Europe*, 29:2, 177-185, doi:10.1080/0379772042000234802

Vuorio, A. M., Puumalainen, K., & Fellnhofer, K. (2018). Drivers of entrepreneurial intentions in sustainable entrepreneurship. *International Journal of Entrepreneurial Behaviour and Research*, 24(2), 359-381. doi:10.1108/IJEBR-03-2016-0097

Walter, S. G., Parboteeah, K. P., & Walter, A. (2013). University departments and self-employment intentions of business students: A cross-level analysis. *Entrepreneurship: Theory and Practice*, 37(2), 175-200. doi:10.1111/j.1540-6520.2011.00460.x

Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. MIS Quarterly, 26(2), XIII-XXIII.

Wegner, D., Thomas, E., Teixeira, E. K., & Maehler, A. E. (2019). University entrepreneurial push strategy and students' entrepreneurial intention. *International Journal of Entrepreneurial Behaviour and Research*, 26(2), 307-325. doi:10.1108/IJEBR-10-2018-0648

Welpe, I. M., Spörrle, M., Grichnik, D., Michl, T., & Audretsch, D. B. (2012). Emotions and opportunities: The interplay of opportunity evaluation, fear, joy, and anger as antecedent of entrepreneurial exploitation. *Entrepreneurship Theory and Practice*, 36(1), 69–96. doi:10.1111/j.1540-6520.2011.00481.x.

Wennberg, K., Wiklund, J., & Wright, M. (2011). The effectiveness of university knowledge spillovers: Performance differences between university spinoffs and corporate spinoffs. *Research Policy*, 40(8), 1128-1143. doi:10.1016/j.respol.2011.05.014

Westhead, P., & Solesvik, M. Z. (2016). Entrepreneurship education and entrepreneurial intention: Do female students benefit? International Small *Business Journal: Researching Entrepreneurship*, 34(8), 979-1003. doi:10.1177/0266242615612534

Wu, S., & Wu, L. (2008). The impact of higher education on entrepreneurial intentions of university students in china. *Journal of Small Business and Enterprise Development*, 15(4), 752-774. doi:10.1108/14626000810917843

Yukongdi, V., & Lopa, N. Z. (2017). Entrepreneurial intention: A study of individual, situational and gender differences. *Journal of Small Business and Enterprise Development*, 24(2), 333-352. doi:10.1108/JSBED-10-2016-0168

Zampetakis, L. A., Lerakis, M., Kafetsios, K., & Moustakis, V. (2016). Anticipated emotions towards new venture creation: A latent profile analysis of early stage career starters. *International Journal of Management Education*, 14(1), 28-38. doi:10.1016/j.ijme.2015.11.004

Zeffane, R. (2012). Gender and Youth Entrepreneurial Potential: Evidence from the

United Arab Emirates. International Journal of Business and Management, 8(1), 60-72.

Zhang, S., Li, Y., Liu, C., & Ruan, W. (2020). Critical factors identification and prediction of tourism and hospitality students' entrepreneurial intention. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 26 doi:10.1016/j.jhlste.2019.100234

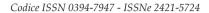
Zhou, W., Yang, X., Li, Y., & Zhang, Y. (2019). Pattern versus level: A new look at the personality-entrepreneurship relationship. *International Journal of Entrepreneurial Behaviour and Research*, 25(1), 150-168. doi:10.1108/IJEBR-03-2018-0176

Zollo, L., Laudano, M. C., Ciappei, C., & Zampi, V. (2017). Factors affecting universities' ability to foster students' entrepreneurial behaviour: An empirical investigation. *Journal of Management Development*, 36(2), 268-285. doi:10.1108/JMD-06-2016-0093



Rivista Piccola Impresa/Small Business

n. 1, anno 2021





INVESTIGATING THE ROLE OF FAMILY, PERSONALITY TRAITS AND SELF-EFFICACY IN SHAPING STUDENTS' ENTREPRENEURIAL INTENTIONS

Tahir Hussain Sukkur IBA University tahir.msmgt17@iba-suk.edu.pk Nisar Ahmed Channa Sukkur IBA University nisar.channa@iba-suk.edu.pk

Altaf Hussain Samo Sukkur IBA University altaf@iba-suk.edu.pk

Article info

Date of receipt: 31/07/2020 **Acceptance date:** 15/04/2021

Keywords: Entrepreneurship; Entrepreneurial intentions; Family background; Personality traits; Self-efficacy.

doi: 10.14596/pisb.2847

Abstract

Recently scholars around the globe have noted the importance of entrepreneurship in creating job opportunities and socio-economic development in both developed and developing economies. Despite this importance, there is lack of research in developing countries regarding antecedents of individuals' entrepreneurial intentions. Using theoretical framework of theory of planned behavior, this research aims to study the effects of family background, personality traits, and self-efficacy on entrepreneurial intentions. To this end, a sample comprised of n = 374 final year university students was utilized to test the hypothesized relationships by employing partial least square structural equation modeling (PLS-SEM) technique. The findings suggest a significant positive impact of family background, personality traits, and self-efficacy on entrepreneurial intentions. In conclusion, the implications of research findings are discussed in detail.

1. Introduction

Developed and developing economies of the world are facing several socio-economic challenges such as globalization, economic downturn, inflation, corruption, income generation and unemployment (Soomro et al., 2020). To face these challenges entrepreneurship is playing significant positive role through economic development, job making and declining in unemployment and inflation (Johansen et al., 2012; Gibbs & Hannon, 2006). So, it has become a desperate need of every economy to divert individuals' entrepreneurial intentions. According to Shapero and Sokol (1982) entrepreneurial intentions represent readiness of individuals to achieve a targeted behavior.

One of the major challenge faced by the developing countries such as Pakistan, is "how to get their young people employed". In Pakistan, every year great number of students are graduating from different universities, without corresponding employment opportunities, which results in causing the increased number of crimes, violence, and other social vices (Farrukh et al., 2017). To limit these social vices, Pakistan's government has taken steps to enhance entrepreneurial intentions in young individuals by offering them entrepreneurial training, and also reviewing the curriculum so that youth may understand self-employment skills aiming at job creation. The focus of entrepreneurial education is on developing knowledge, skills, capacities, entrepreneurial attitudes, and intentions. Entrepreneurial education is the most significant way of job creation and to support growth (Westhead & Solesvik, 2016; Hussain & Norashidah, 2015).

Entrepreneurship has tendency to offer plenty of employment opportunities in order to get financial benefits so it can be said that entrepreneurship is crucial for both national economic development and individuals (Audretsch, Belitski, & Desai, 2015; Aparicio, Urbano, & Audretsch, 2016). Irrespective of these advantages of entrepreneurship and trainings great number of graduates are interested in jobs rather than starting their own business venture (Farrukh et al., 2017). From above discussion we infer that individual's engagement in entrepreneurial activity is merely dependent on entrepreneurial knowledge but more on their intentions.

According to prominent scholars like Ajzen (1991); Shapero and Sokol (1982), theory of planned behavior can develop entrepreneurial intentions. Regardless of seminal work of Ajzen (1991), Kruger (1993) also developed entrepreneurship intention model, which states that "perceived desirability and perceived feasibility are antecedents of intensions to engage in entrepreneurial intentions, while social norms and self-efficacy are the predictors of perceived desirability and perceived feasibility" (Krueger & Brazeal, 1994). These two models are the theoretical basis of this study.

Previous scholarly literature on entrepreneurial intensions have unco-

vered several predictors to become an entrepreneur such as, marital status, gender, and age, (Chaudhary, 2017; Samuel & Ernest., 2013; Bates, 1995), personality (Karabulut, 2016), attitude (Pihie & Bagheri, 2011), self-efficacy (Santoso, 2016) and entrepreneurial education (Premand et al., 2016). However, empirical research on entrepreneurial intension is still lacks particularly in Pakistan (Soomro et al., 2020). It is observed in Pakistani universities that business students have sufficient courses related to entrepreneurship. Despite having good grades in entrepreneurship the students could not manage the entrepreneurial aspect in real terms and end up in unemployment. Unemployment is the basic reason of social vices. Based on these arguments there is need to conduct research on the factors that influence entrepreneurial intentions of students, particularly in developing economies. Therefore, the main focus of this study is to investigate the impact of five factors model of personality, self-efficacy, and family background on entrepreneurial intentions of the university students.

2. Literature review and hypotheses development

Theory of planned behavior

The theory of planned behavior (TPB) was provoked to propose the theoretical framework of current study to understand the antecedents of Pakistani students' entrepreneurial intentions (Aijzen, 1991). According to TPB, individuals' entrepreneurial intentions identify the endeavor they will opt to carry out the entrepreneurial behavior (Ajzen, 1991). TPB classifies personal attitudes towards the behavioral outcomes, perceived social norms which reveals desirability of performing the behavior and perceived behavioral Control (PBC) reflects the personal competence of controlling the behavior (Ajzen, 1991). Three interdependent antecedents of intentions i.e. attitude towards behavior, subjective norms and perceived behavioral control are further suggested by Ajzen (1991). It is generally explained that the more favorable the three antecedents higher should be the individual's intention for performing the particular behavior. Kreuger et al. (2000:p.412) suggested that "Intentions are the single best predictor of any planned behavior, including entrepreneurship" therefore the antecedents of intentions increase our understanding of the planned behavior.

The TPB is considered to be applicable to any behavior which needed some level of planning (Kreuger et al., 2000). This signify the compatibility of the theory and its applications in various fields of research (Kolver & Kolveried, 1996). The outcome of research in various fields suggested that model proved it's significant in predicting the intentions (Lo, 2011). In entrepreneurship research, TPB is widely applied to study entrepreneurial

intentions (i.e. Jaen & Linan, 2013; Zhang et al., 2014; Karimi et al., 2014). Therefore, in given assertions, we used theoretical lens of TPB to study the effects of family, personality traits and self-efficacy in shaping Pakistani students' entrepreneurial intentions.

Family background and entrepreneurial intension (EI)

Entrepreneurial event model admits that family plays significant role in developing intensions of child to start business venture. Father and mother in particular plays major roles as far as the business desirability and feasibility is concerned (Shapero & Sokol, 1982). Moreover, if family provides a child with efficient and effective role modeling it is can serve as the developing entrepreneurial foundation (Pruett et al., 2009). Thus, the possibility of strong inclination for entrepreneurship is such child is greater as he/she grows older (Krueger, Reilly & Carsrud, 2000). As per Drennan, Kennedy and Renfrow (2004) family background is classified into three main factors i.e. past family business exposure, frequent relocation during childhood and a difficult childhood, they holds the view that early business exposure and experience of family business have significant effect on attitude and intentions of family members. Family background plays crucial role in developing entrepreneurial intentions (Carr & Sequeira, 2007). Some research scholars also broadened family background to genetic characteristics (Nicolaou & Shane, 2010; Laspita et al., 2012). According to these scholars the link between parents and grandparents having entrepreneurial experience develops communication and structural patterns which enhances preference for entrepreneurship preference in grandchildren. There is an indirect relationship between family background and entrepreneurial intentions (Kolvereid, 1996). Based on above literature and TPB (Ajzen, 1991), we can conclude that family background has significant impact on individual's perceptions related to the desirability and feasibility of the venture. Thus we propose,

H1: There is significant positive relationship between family background and entrepreneurial intentions.

Personality and entrepreneurial intensions

Personality traits or characteristics have been studied comprehensively to analyze the influence of different traits on entrepreneurial intentions of the individuals. According to the theory of career choice, individual's career choice is based on the manifestation of his/her personality. Previous research also observed the positive link between personality traits and entrepreneurial intentions (Karabulut, 2016). But the finding in past studies are inconsistent. Like, some studies have revealed that personality

characteristics are strong indicators of entrepreneurial intentions (Zeffane, 2015; Karabulut, 2016). Studies conducted by Zeffane (2015) and Karabulut (2016) found the visible difference among the personality traits of the individuals who choose job and individuals who choose entrepreneurship as a career (Kolvereid, 1996). Current study took into account big five personality traits to analyze the impact on entrepreneurial intentions. Big five personality traits are conscientiousness, openness to experience, extroversion, agreeableness, and neuroticism.

Conscientiousness

Individuals having this type of personality have characteristics such as responsibility, dependability, dutifulness, achievement orientation, follow rules and deliberation (McCrae & Costa, 1987). Ambitiousness, achievement orientation and persistent of conscientiousness are main characteristics of entrepreneurs (McClelland, 1961). Achievement oriented individuals are more enthusiastic to work in situation where they have sufficient control over the situation (Zhao et al., 2010). Therefore, we can conclude that the achievement-oriented individuals are more motivated towards entrepreneurship, based on the claim of Zhao et al. (2010) that if role is compatible to their personalities and TPB (Ajzen, 1991). Thus we hypothesize that,

H2: There is significant positive relationship between conscientiousness and entrepreneurial intentions.

Openness to experience

The main characteristics of individuals having openness to experience personality type are imaginativeness, creativity, and intellectual curiosity. Kirzner (1973) argued that like entrepreneurs open to experience individuals have creative ideas and unconventional values. Previous scholarly literature identified openness to experience as a prominent indicator of entrepreneurship (Zhao et al., 2010; Antoncic et al., 2015). Individuals with openness to experience personality type have greater chances to identify opportunities (Pech & Cameron, 2006). Based on above discussion and TPB (Ajzen, 1991), we propose following hypothesis:

H3: There is significant positive relationship between openness to experience and entrepreneurial intentions.

Extroversion

Extrovert individuals are energetic, aspiring, warm, outgoing, and passionate (Farrukh, Ying, & Mansori, 2016). Individual that has these types of characteristics to be more motivated and lookout for stimulation (Costa &

McCrae, 1992). Extrovert takes event as challenges instead of threats (Wan Shahraad Wan Sulaiman et al., 2013). Gregariousness, excitement-seeking, positive emotions, and warmth are the characteristics of extrovert individual (Costa & McCrae, 1992). These characteristics of extroverts are useful in developing network of external support which is vital for prospective entrepreneurs (Chandler & Jensen, 1992). Costa, McCrae, and Holland, (1984) found that extroverted individuals are interested in enterprising occupations. Entrepreneurship as career may appear to be more exciting and stimulating than other traditional business occupations (Zhao et al., 2010) thus, more exciting, and attractive to the extrovert individuals. Therefore, we propose that,

H4: There is significant positive relationship between extraversion and entrepreneurial intentions

Agreeableness

People with agreeable traits of personality are trusting, cooperative and courteous (Goldberg, 1990). They tend to be tolerant, good natured and considerate (Digman, 1990; Sung & Choi, 2009). In contrast to the present, people that score less on agreeable trait are suspicious, self-cantered and manipulative. Consistent with Zhao et al. (2010), agreeable people are more curious about occupations which have frequent social interactions like teaching and welfare work than in business. As entrepreneurship cares with creating a replacement venture, that is built around the self-interests of the entrepreneurs accordingly we propose the subsequent hypothesis,

H5: There is significant positive relationship between agreeable and entrepreneurial intentions.

Neuroticism

Neurotic individuals have the characteristics like temperamental, tense, lack of confidence, irritable and morose. According the literature, entrepreneurs are hardy, optimistic, and steady within the face of social pressure, stress, and uncertainty (Locke, 2000). Furthermore, individual scoring high on neuroticism are scared of things during which they need probability of failing and that they also lack the arrogance needed to require initiative in risk taking activities for staring a replacement venture (Raja, Johns, Ntalianis & Johns, 2004). But still there is possibility that an individual with neuroticism personality type have entrepreneurial intentions based on the family business or social influence. Thus we propose,

H6: There is significant positive relationship between neuroticism and entrepreneurial intentions.

Self-efficacy and entrepreneurial intentions

The notion of self-efficacy was introduced by Bandura (1977), who explained it as perceptions of individuals related to their own abilities play vital role in building intentions of any particular activity or task. Wood and Bandura (1989) defined self-efficacy as "one's self cognitive estimate towards his or her capabilities to utilize motivation, available cognitive resources, and courses of action needed to come over the events in his/her life". Self-efficacy of individuals has significant impact on entrepreneurial choice and development (Boyd & Vozikis, 1994). Self-efficacy can be the crucial source of identifying the strength of entrepreneurial intentions and putting them in actions. Previous scholarly literature has also found the strong significant link between self-efficacy and entrepreneurial intentions (Utami, 2017; Aslam & Hasnu, 2016; Pihie & Bagheri, 2013). Therefore, in line with these studies and TPB (Ajzen, 1991), we believe that self-efficacy positively influence students' entrepreneurial intentions. Thus the following hypothesis is proposed:

H7: There is significant positive relationship between self-efficacy and entrepreneurial intentions.

3. Methodology

Participants and procedure

To conduct this study, a self-explanatory survey questionnaire was employed to collect data from final year students of BBA (Bachelor of Business Administration) and MBA (Master of Business Administration) degree programs of three public and two private sector universities of Punjab province of Pakistan by using convenience sampling method. The respondents were approached in two different ways. First, students were approached by sending them the survey link through email and WhatsApp messaging app. Second, we approached students at university campuses and asked them to fill the survey questionnaire. Students were asked to complete the questionnaire that covered their self-efficacy, personality traits and entrepreneurial intentions. Initially, 500 surveys were distributed among students. The total number of survey returned was 421 and after a thorough evaluation, 47 responses were dropped due to incomplete information. Therefore, the valid sample size was n = 374.

Measures

Respondents were asked to rank a series of different questions on a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Entrepreneurial intentions of the students were measured by adopting scale used by Leong (2008). Similarly, self-efficacy was measured by using scale of Schwarz and Jerusalem (1995), while the personality traits were measured by using inventories of John and Srivastava (1999). The information related with the family background was obtained by asking respondents about occupation of their parents. (See appendix 2 for scale items).

Statistical Procedures

Partial least square structural equation modeling (PLS-SEM) approach was adopted using Smart PLS software version 3.2.9. The rationale behind using PLS-SEM is the fact that current study focuses on investigating whether Family, Personality Traits and Self-Efficacy shape entrepreneurial intentions among Pakistani students. Hence, in given assertion, this research focuses on prediction therefore application of PLS-SEM is more appropriate (Channa et al., 2021; Channa et al., 2020; Hair et al., 2016).

Following recommendations suggested in PLS-SEM literature, a two-step approach was followed to analyze the collected data (Channa et al., 2020; Umrani et al., 2020). First, measurement model was assessed to examine the inter-item reliability, convergent validity, and internal consistency reliability. Second, the structural model was assessed to examine path coefficients and test the hypotheses.

4. Results

Measurement Model

First, inter-item reliability was assessed by evaluating factor loadings and a suggested threshold of 0.50 was maintained (Hair et al., 2014). Second, convergent validity was examined by analyzing average variance extracted (AVE) and a threshold of 0.50 was maintained (Bagozzi et al., 1991; Chin, 1998). Third, internal consistency reliability was ascertained by evaluating composite reliability (CR) scores, the values were found above the suggested threshold of 0.70 (Hair et al., 2016; Chin., 1998; Fornell & Larcker, 1981). The results of measurement model are presented in Table 1.

Tab. 1: Measurement Model

Construct	Items	Loadings	Alpha	CR	AVE	
	FB1	0.879				
Family Background	FB2	0.894	0.870	0.920	0.793	
	FB3	0.898				
	EXT1	0.565				
Extroversion	EXT2	0.708	0.627	0.771	0.500	
Extroversion	EXT3	0.617	0.637			
	EXT4	0.803				
	NEU1	0.855				
NI	NEU2	0.932	0.021	0.939	0.704	
Neuroticism	NEU3	0.884	0.921		0.794	
	NEU4	0.892				
	AGR1	0.954		0.882		
Agreeableness	AGR2	0.934	0.852		0.721	
	AGR4	0.615				
Conscientiousness	CON1	1.000	1.000	1.000	1.000	
	SE1	0.783				
C-16 E66	SE2	0.422	0.600	0.729	0.515	
Self-Efficacy	SE3	0.554	0.600		0.515	
	SE4	0.749				
	EI1	0.804				
T	EI2	0.889	0.060	0.907	0.709	
Entrepreneurial Intentions	EI3	0.763	0.869			
	EI4	0.904				
	OE1	0.859				
	OE2 0.959		0.002	0.045	0.504	
Openness to Experience	OE3	0.817	0.902	0.917	0.736	
	OE4	0.789				

Source: our elaboration

Discriminant Validity

We used hetrotrait-monotrait ratio of correlations (HTMT) to ascertain discriminant validity (Henseler et al., 2015). The reason behind using HTMT method is the recent criticism on Fornell and Larcker (1981) criterion. Literature suggests that discriminant is ascertained when HTMT values found below 0.85 (Kline, 2005) or 0.90 (Gold et al., 2001). The results presented in Table 2 suggested all HTMT values met the suggested threshold of 0.85 (Kline, 2005).

Tab. 2: Discriminant Validity (HTMT-Ratio)

Construct	1	2	3	4	5	6	7	8
Agreeableness								
Conscientiousness	0.062							
Entrepreneurial Intentions	0.066	0.151						
Extroversion	0.677	0.235	0.135					
Family Background	0.065	0.133	0.135	0.109				
Neuroticism	0.597	0.283	0.131	0.585	0.111			
Openness to Experience	0.473	0.164	0.111	0.519	0.074	0.472		
Self-Efficacy	0.223	0.356	0.261	0.284	0.120	0.237	0.173	

Source: our elaboration

Structural Model

According to PLS-SEM literature, the second step is to assess the significance of path coefficients and test hypothesis (Henseler et al., 2009; Anderson & Gerbing, 1988). The path coefficients were assessed with 5000 subsamples (Hair et al., 2011) by using Smart PLS software (Ringle et al., 2015). The results of structural model presented in Table 3 suggested that all proposed hypotheses were found statistically significant.

Hypothesis 1 of current study suggests agreeableness is positively related with entrepreneurial intentions. Our results empirically supported Hypothesis 1 ($\beta = -0.059$, t = 3.493, p = 0.001). Similarly, hypothesis 2 suggests that consciousness is positively associated with entrepreneurial intentions and our results fully supported this phenomenon ($\beta = 0.076$, t = 6.853, p = 0.000). Likewise, hypothesis 3 postulates that extroversion is related with entrepreneurial intentions. Our results fully supported hypothesis 3 $(\beta = 0.072, t = 3.580, p = 0.000)$. The hypothesis 4 of this research suggests positive association between family background and entrepreneurial intentions is also fully supported by our findings ($\beta = 0.105$, t = 4.980, p = 0.000). The hypothesis 5 suggesting that neuroticism is positively related with entrepreneurial intentions is also supported by results ($\beta = 0.091$, t = 4.182, p = 0.000). In similar way, our findings also support hypothesis 6, suggesting that openness is positively associated with entrepreneurial intentions ($\beta = -0.111$, t = 8.271, p = 0.000). Finally our results also provided empirical support to hypothesis 7, suggesting a positive relationship between self-efficacy and entrepreneurial intentions ($\beta = 0.198$, t = 13.999, p = 0.000).

Tab. 3: Structural Model

Hypothesis	Relationships	Beta	SD	t-Values	P-Values
1	Agreeableness -> EI	-0.059	0.017	3.493	0.001
2	Conscientiousness -> EI	0.076	0.011	6.853	0.000
3	Extroversion -> EI	0.072	0.020	3.580	0.000
4	Family Background -> EI	0.105	0.021	4.980	0.000
5	Neuroticism -> EI	0.091	0.022	4.128	0.000
6	Openness to EI	-0.111	0.013	8.271	0.000
7	Self-Efficacy -> EI	0.198	0.014	13.999	0.000

Note: EI = Entrepreneurial Intentions

Source: our elaboration

R2 assessment

Academic research suggests that R2 value of 0.10 is considered as acceptable (Umrani et al., 2019). According to Falk and Miller (1992), in social sciences research the required threshold of R2 values in 0.10. As Table 4 suggests, we found R2 value of 0.109, which meets criteria suggested in academic research. Furthermore, results presented in Table 4 suggest that all predicable variables explain 10% of variance in entrepreneurial intentions.

Tab. 4: Predictive Relevance

Construct	R Square
Entrepreneurial Intentions	0.109
Construct	Q2
Entrepreneurial Intentions	0.067

Source: our elaboration

Predictive relevance of the model

The predictive relevance of the model was assessed by examining cross validated redundancy or Q2. Literature suggests that Q2 values greater than zero as regarded as acceptable. The Q2 values were obtained by performing blindfolding procedure in Smart PLS software (Ringle et al. 2015). Table 4 suggests that obtained value of Q2 is greater than zero, therefore the predictive relevance of the model has been established.

5. Discussion

The underlying objective of this study was to analyze the impact of family background, personality traits and self-efficacy on the entrepreneurial intentions of the business students. The results disclosed strong link between antecedents and outcome variables. The findings of our study are consistent with Zhao and Seibert (2006). Results revealed that family background positively influence entrepreneurial intentions of the students as advocated in past scholarly literature that children are more inclined to entrepreneurship if their parents are entrepreneurs (Carr & Sequeira, 2007; Akanbi, 2013). When individuals are unsure and indecisive about their career then prior knowledge and experience have significant influence on the intensions to choose a career path. Thus, entrepreneurial intentions are strongly influenced by the family and environment in which individual grows. Furthermore, entrepreneur parents specifically in Pakistani culture wants their children to be part of their business because it will make them financially independent.

A positive relationship between self-efficacy and entrepreneurial intentions was also found. This study endorsed the statement of social cognitive theory Bandura (1997) which explained that human behavior is the outcome of interpersonal influences. Additionally, the results of this study are in line with the prior research that found significant positive link between self-efficacy and entrepreneurial intentions (Zhao at al., 2005; Culbertson at al., 2011). Therefore, it can be concluded that self-belief of individuals' plays vital role in developing intentions to come up with a new business venture.

The findings of this study revealed the link of big five personality traits with EI as, consciousness, openness to experience, extroversion, agreeableness, and neuroticism have significant positive relationship. Consciousness personality type individuals have characteristics such as dependability, responsibility, and achievement orientation. These traits specifically achievement orientation makes them more suitable for starting their own business ventures. Openness personality type individuals have prominent characteristics like imagination and curiosity. Thus, Individuals with this personality type are more inclined towards the new activities as they are more curious and imaginative. Our research empirically proved this notion. Individuals with extrovert personality type are more social and outgoing. Based on these characteristics we can say that these individuals possess the ability to develop new networks and utilize existing contact more efficiently as explained by Farrukh et al. (2016). Finding of this study are consistent with previous studies (Brice, 2004; Kuratko et al, 2005; Ismail et al., 2009; Jing & Sung, 2012).

6. Implications

Few implications emerged from this research. Findings of this research have important implications for the academicians as they must consider knowledge factors while training entrepreneurial skills to the students. Because if these factors are not present in trainings students' attention to start a business venture may prove to be poor. Entrepreneurial activities play major role to reduce the unemployment. It is suggested that academicians should help and motivate students to convert their intentions into action by developing plans and trainings. Findings of this research also suggest academicians to design persistent and effective entrepreneurial trainings which improves students' self-efficacy. To accomplish this, academicians should provide students with some simulations related to entrepreneurship, writing new business plans, role playing and case studies. In developing countries like Pakistan there is dire need of offering experimental entrepreneurship learning activities to youth because these activities furnish their abilities and attitudes toward entrepreneurship. In short, family background, personality traits and self-efficacy are important factors linked to entrepreneurial intentions. Furthermore, the findings of current study highlights the importance of entrepreneurship in reducing unemployment and enterprise generation. Therefore, it is necessary that the policymakers should devise strategies to provoke entrepreneurial behaviors among youth, more specifically among students by designing and starting specialized degree programs in entrepreneurship.

7. Limitations and future research

Although, this research made significant contributions to entrepreneurship literature, however there are some limitations associated with this study. First, like many other quantitative studies, the geographical boundaries of this study are limited to only on province, therefore the findings may not ne generalize to other contexts. Therefore future research by taking a larger sample from different geographical locations is needed. Second, the sample of current study is comprised of both male and female students. Despite of the fact that academic research suggests behavioral responses of individuals vary according to their gender (Gilal et al., 2019), we were unable to analyze any significant difference between entrepreneurial intentions of male and female students. Therefore, future research may fill this void by studying the differences between male and female students' entrepreneurial intentions. Finally, although we found direct significant link between students' family background, self-efficacy, and personality traits, and entrepreneurial intentions. The explanatory power of current study may be improved by testing other antecedents of entrepreneurial intentions (i.e. self-esteem, education, and social influence) and moderators (i.e. individual values, opportunity recognition, gender, and age).

Appendix 1:

Fig. 1: Theoretical Model



Source: our elaboration

Appendix 2: Questionnaire Items

Entrepreneurial Intentions

Intend to set up a company in the future

I will choose a career as an entrepreneur.

I prefer to be an entrepreneur rather than to be an employee in an Organization

The idea is appealing of one day starting your own business.

I want the freedom to express myself in my own business

Personality Traits

I see myself as someone who is talkative

I see myself as someone who is full of energy

I see myself as someone who generates a lot of enthusiasm

I see myself as someone who tends to be quiet.

I see myself as someone who has an assertive personality

I see myself as someone who is sometimes shy, inhibited

I see myself as someone who is sometimes shy, inhibited

I see myself as someone who is outgoing, sociable.

I see myself as someone who tends to find fault with others

I see myself as someone who is helpful and unselfish with others

I see myself as someone who starts quarrels with others

I see myself as someone who has a forgiving nature

I see myself as someone who is generally trusting

I see myself as someone who is considerate and kind to almost everyone

I see myself as someone who is sometimes rude to others

I see myself as someone who likes to cooperate with others

I see myself as someone who does a thorough job

I see myself as someone who can be somewhat careless

I see myself as someone who is a reliable worker

I see myself as someone who tends to be disorganized.

I see myself as someone who tends to be lazy

I see myself as someone who perseveres until die task is finished

I see myself as someone who does things efficiently

I see myself as someone who makes plans and follows through with them

I see myself as someone who is easily distracted

I see myself as someone who is depressed, blue

I see myself as someone who is relaxed, handles stress well

I see myself as someone who worries a lot

I see myself as someone who is emotionally stable, not easily upset

I see myself as someone who can be moody

I see myself as someone who remains calm in tense situations

I see myself as someone who gets nervous easily

I see myself as someone who is original, comes up with new ideas

I see myself as someone who is curious about many different things.

I see myself as someone who is ingenious, a deep thinker

I see myself as someone who has an active imagination

I see myself as someone who is inventive

I see myself as someone who values artistic, aesthetic experiences

I see myself as someone who is sophisticated in art, music, or literature

Self-efficacy

I can always manage to solve difficult problems if I try hard enough

If someone opposes me, I can find the means and ways to get what I want.

It is easy for me to stick to my aims and accomplish my goals.

I am confident that I could deal efficiently with unexpected events.

Thanks to my resourcefulness, I know how to handle unforeseen situations.

I can solve most problems if I invest the necessary effort.

I can remain calm when facing difficulties because I can rely on my coping abilities.

When I am confronted with a problem, I can usually find several solutions.

If I am in trouble, I can usually think of a solution

I can usually handle whatever comes my way.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.

Akanbi, S. T. (2013, December). Familial factors, personality traits and self-efficacy as determinants of entrepreneurial intention among vocational based college of education students in Oyo State, Nigeria. In *The African Symposium* 13 (2),66-76.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.

Antoncic, B., Bratkovic Kregar, T., Singh, G., & Denoble, A. F. (2015). The Big Five Personality-Entrepreneurship Relationship: Evidence from Slovenia. *Journal of Small Business Management*, 53(3), 819–841.

Aparicio, S., Urbano, D., & Audretsch, D. (2016). Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. *Technological Forecasting and Social Change*, 102, 45–61.

Aslam, S., & Hasnu, S. (2016). Issues and constraints perceived by young entrepreneurs of Pakistan. *World Journal of Entrepreneurship, Management and Sustainable Development*, 12(1), 50–65.

Audretsch, D. B., Belitski, M., & Desai, S. (2015). Entrepreneurship and economic development in cities. *The Annals of Regional Science*, 55(1), 33-60.

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative science quarterly*, 421-458.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191.

Bates, T. (1995). Self-employment entry across industry groups. *Journal of Business Venturing*, 10(2), 143–156.

Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, 18(4), 63-77.

Brice, J. (2004). The role of personality dimensions on the formation of entrepreneurial intentions. USASBE Small Business Advancement National Center. USA: University of Central Arkansas.

Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A Theory of Planned Behavior approach. *Journal of Business Research*, 60(10), 1090–1098.

Chandler, G.N., & Jensen.D.A. (1992). Gauging performance in emerging business: longitudinal Economic and Administrative series, 3, 139-148.

Channa, N. A., Bhutto, M. H., Bhutto, M., Bhutto, N. A., & Tariq, B. (2020). Capturing customer's store loyalty through relationship benefits: Moderating effect of retail innovation. *European Business Review*. Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/EBR-09-2019-0179

Chaudhary, R. (2017). Demographic factors, personality and entrepreneurial inclination. *Education + Training*, 59(2), 171–187.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.

Costa Jr, P. T., & McCrae, R. R. (1992). Four ways five factors are basic. *Personality and individual differences*, 13(6), 653-665.

Costa, P. T., McCrae, R. R., & Holland, J. L. (1984). Personality and vocational interests in an adult sample. *Journal of Applied psychology*, 69(3), 390.

Culbertson, S. S., Smith, M. R., & Leiva, P. I. (2011). Enhancing entrepreneurship: The role of goal orientation and self-efficacy. *Journal of Career Assessment*, 19(2), 115-129.

Digman, J. M. (1990). Personality Structure: Emergence of the Five-Factor Model. *Annual Review of Psychology*, 41(1), 417–440.

Drennan, J. C., Kennedy, J., & Renfrow, P. (2004). Understanding entrepreneurial intentions. The importance of childhood experiences. CQUniversity, conference contribution, https://hdl.handle.net/10018/16544

- Farrukh, M., Khan, A. A., Khan, M. S., Ramzani, S. R., & Soladoye, B. S. A. (2017). Entrepreneurial intentions: the role of family factors, personality traits and self-efficacy. *World Journal of Entrepreneurship, Management and Sustainable Development*. 13 (4), 303-317
- Farrukh, M., Ying, C. W., & Mansori, S. (2016). Intrapreneurial behavior: an empirical investigation of personality traits. *Management & Marketing. Challenges for the Knowledge Society*, 11(4), 597-609.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Gibb, A., & Hannon, P. (2006). Towards the entrepreneurial university. *International Journal of Entrepreneurship Education*, 4(1), 73-110.
- Gilal, F. G., Chandani, K., Gilal, R. G., Gilal, N. G., Gilal, W. G., & Channa, N. A. (2019). Towards a new model for green consumer behaviour: A self-determination theory perspective. *Sustainable Development*. 28(4), 711-722.
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, 18(1), 185-214.
- Goldberg, L. R. (1990). An alternative" description of personality": the big-five factor structure. *Journal of personality and social psychology*, 59(6), 1216.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *European business review*. 26 (2),106-121
- Hair Jr, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I-method. *European Business Review*. 28 (1), 63-76.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
- Hussain, A., & Norashidah, D. (2015). Impact of entrepreneurial education on entrepreneurial intentions of Pakistani Students. *Journal of Entrepreneurship and Business Innovation*, 2(1), 43-53.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial intention among Malaysian undergraduates. *International Journal of Business and Management*, 4(10), 54-60.
- Jing, L. L., & Sung, M. (2012). University students personality traits and entrepreneurial intention: Using entrepreneurship and entrepreneurial attitude as mediating variable. *International Journal of Economic Research*, 3(3), 76-82.
- Johansen, V., Schanke, T., & Clausen, T. H. (2012). Entrepreneurship education and pupils' attitudes towards entrepreneurs. Entrepreneurship-Born, Made and Educated, 113-126.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of personality: Theory and research*, 2(1999), 102-138.
- Karabulut, A. T. (2016). Personality Traits on Entrepreneurial Intention. *Procedia Social and Behavioral Sciences*, 229, 12–21.
 - Kirzner, I. (1973). The entrepreneur. Competition and entrepreneurship, 30-87.
- Kline, R. B. (2005). Methodology in the social sciences Principles and practice of structural equation modeling. New York.
- Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship Theory and practice*, 21(1), 47-58.
- Krueger, N. (1993). Title: The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability Author(s): Norris Krueger Source: *Entrepreneurship: Theory and Practice*, (January 1993), 1–13.
- Krueger, N. F., & Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–104.

Krueger, N., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5–6), 411–432.

Kuratko, D. F., Hornsby, J. S., & Bishop, J. W. (2005). Managers' corporate entrepreneurial actions and job satisfaction. *The International Entrepreneurship and Management Journal*, 1(3), 275-291.

Laspita, S., Breugst, N., Heblich, S., & Patzelt, H. (2012). Intergenerational transmission of entrepreneurial intentions. *Journal of Business Venturing*, 27(4), 414–435.

Leong, C. K. (2008). Entrepreneurial intention: an empirical study among Open University Malaysia (OUM) students (Doctoral dissertation, Open University Malaysia (OUM)).

Locke, E. (2000). Motivation, cognition, and action: An analysis of studies of task goals and knowledge. *Applied Psychology*, 49(3), 408-429.

McClelland, D. C. (1961). Achieving society (No. 15). Simon and Schuster.

McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of personality and social psychology*, 52(1), 81.

Muhib, Y., & Khan, N. (2010). The Prospects of Entrepreneurial Education in Pakistan: An Economic Perspective. *Journal of Independent Studies and Research-Management, Social Sciences and Economics*, 8(2), 1–10.

Nicolaou, N., & Shane, S. (2010). Entrepreneurship and occupational choice: Genetic and environmental influences. *Journal of Economic Behavior and Organization*, 76(1), 3–14.

Pech, R. J., & Cameron, A. (2006). An entrepreneurial decision process model describing opportunity recognition. *European Journal of Innovation Management*, 9(1), 61–78.

Pihie, Z. A. L., & Bagheri, A. (2011). Malay students' entrepreneurial attitude and entrepreneurial efficacy in vocational and technical secondary schools of Malaysia. *Pertanika Journal of Social Science and Humanities*, 19(2), 433–447.

Pihie, Z. A. L., & Bagheri, A. (2013). Self-Efficacy and Entrepreneurial Intention: The Mediation Effect of Self-Regulation. *Vocations and Learning*, 6(3), 385–401.

Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (2016). Entrepreneurship Education and Entry into Self-Employment Among University Graduates. *World Development*, 77, 311–327.

Pruett, M., Shinnar, R., Toney, B., Llopis, F., & Fox, J. (2009). Explaining entrepreneurial intentions of university students: a cross-cultural study. *International Journal of Entrepreneurial Behaviour & Research*, 15(6), 571–594.

Raja, U., Johns, G., Ntalianis, F., & Johns, G. (2004). The impact of personality on psychological contracts. *The Academy Of Management Journal*, 47(3), 350–367.

Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. Bido, D., da Silva, D., & Ringle, C.(2014). Structural Equation Modeling with the Smartpls. Brazilian Journal Of Marketing, 13(2).

Samuel, Y. A., Ernest, K., & Awuah, J. B. (2013). An assessment of entrepreneurship intention among Sunyani Polytechnic Marketing students. *International Review of Management and Marketing*, 3(1), 37.

Santoso, S. (2016). Influence of Self-Efficacy To Student Entrepreneurial-Intention With Student Background As a Moderating Variable: Case Study in Indonesia. *Journal of Information, Business and Management*, 8(4), 131–145.

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-efficacy Scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-Nelson.

Shapero, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. *Encyclopedia of entrepreneurship*, 72-90.

Soomro, B. A., Lakhan, G. R., Mangi, S., & Shah, N. (2020). Predicting entrepreneurial intention among business students of public sector universities of Pakistan: an application of the entrepreneurial event model. *World Journal of Entrepreneurship, Management and Sustainable Development.*, 16(3), 219-230

Sung, S. Y., & Choi, J. N. (2009). Do Big Five personality factors affect individual creativity? The moderating role of extrinsic motivation. *Social Behavior and Personality*, *37*(7), 941–956.

Umrani, W. A., Channa, N. A., Yousaf, A., Ahmed, U., Pahi, M. H., & Ramayah, T. (2020). Greening the workforce to achieve environmental performance in hotel industry: A serial mediation model. *Journal of Hospitality and Tourism Management*, 44, 50-60.

Utami, C. W. (2017). Attitude, Subjective Norms, Perceived Behavior, Entrepreneurship Education and Self-efficacy toward Entrepreneurial Intention University Student in Indonesia. *European Research Studies Journal Volume XX*, 2(2), 475–495. Retrieved from http://www.ersj.eu/repec/ers/papers/17_2_A_p29.pdf.

Wan Shahraad Wan Sulaiman, Nor Ba'yah Abdul Kadir, Fatimah Wati Halim, Fatimah Omar, Rabiah Abdul Latif, & Wan Samhanim Wan Sulaiman. (2013). Structural relations between personality traits, coping strategy, social support and well-being among Adolescents. *Pertanika Journal of Social Science and Humanities*, 21(S), 121–134.

Westhead, P., & Solesvik, M. Z. (2016). Entrepreneurship education and entrepreneurial intention: Do female students benefit? *International Small Business Journal*, 34(8), 979-1003.

Wood, R., & Bandura, a. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, 56(3), 407–415.

Zeffane, R. (2015). Trust, personality, risk taking and entrepreneurship. World Journal of Entrepreneurship, Management and Sustainable Development.

Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: A meta-analytical review. *Journal of applied psychology*, 91(2), 259.

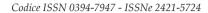
Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of applied psychology*, 90(6), 1265.

Zhao, H., Seibert.Scott, & Lumpkin, G. T. (2010). Journal of Management. *Journal of Management*, 36(2), 381–404.



Rivista Piccola Impresa/Small Business

n. 1, anno 2021





DETERMINANTS AND SUCCESS FACTORS OF STUDENT ENTREPRENEURSHIP: EVIDENCE FROM THE UNIVERSITY OF PADOVA

Silvia Rita Sedita University of Padova silvia.sedita@unipd.it Silvia Blasi University of Padova silvia.blasi@unipd.it

Article info

Date of receipt: 24/01/2020 Acceptance date: 20/04/2021

Keywords: Student entrepreneurship; Success of entrepreneurial action

doi: 10.14596/pisb.2824

Abstract

Studying student entrepreneurship is an innovative way of examining the impact of universities on a territory. This study of the entrepreneurial activities of the 119,347 graduates of the University of Padova between 2000 and 2010 sheds light on the determinants of student entrepreneurship and of the success of entrepreneurial action. The analysis reveals that student entrepreneurship is 1) gender-biased, 2) positively correlated with entrepreneurship education, 3) dependent on the university course attended by the entrepreneur, and 4) negatively affected by a period of study abroad. The success of entrepreneurial action is 1) positively dependent on proximity between the type of activities performed by the company and the type of university course attended and 2) not influenced by proximity between the location of a start-up and the founder's place of residence. The implications of these results for the organization of university curricula and possible actions to support student entrepreneurship are discussed.

1. Introduction

Universities contribute to the progress and economic growth of countries in many ways: by generating and diffusing knowledge, spreading culture, influencing skill development, educating and training the workforce, solving problems, and developing new instruments (Rothaermel et al., 2007). In "the era of open innovation" (Chesbrough, 2006), firms are encouraged to seek external ideas and knowledge to be more innovative, and "universities are increasingly being called upon to contribute to economic development and competitiveness" (Feller, 1990). To make this contribution effective, universities can no longer be "ivory towers," isolated and focused on internal issues; they are expected to contribute to economic development through various channels, such as technology transfer activities, patents, spin-offs, and start-ups (Etzkowitz et al., 2000). The literature has largely focused on the modalities through which universities perform technology transfer activities (Rothaermel et al., 2007; Perkmann et al., 2013). Some scholars have focused on the type of scientists that are likely to positively affect university-industry relationships and have mainly investigated co-patenting activities, which stem from collaborations between companies and universities or other public-private partnerships (Zucker and Darby, 1996; Baba et al., 2009). More recently, a stream of literature has focused on the role of academic spin-offs in stimulating new ventures and regional collaborations between universities and established companies, thereby fostering the creation of an entrepreneurial ecosystem (Mansour et al., 2018; Mathisen and Rasmussen, 2019; Rasmussen et al., 2011). Stam and Spigel (2016: 1) defined an entrepreneurial ecosystem as a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory. Less is known about student entrepreneurship, although figures show that it is impactful in shaping the development trajectories of university regions. Research on the role of university graduates in entrepreneurial activity is lacking despite the fact that it appears to be an important phenomenon. In this paper, we examine the factors that impact university graduates' decisions to pursue entrepreneurial ventures.

Existing research, such as that of Souitaris et al. (2007) and Hsu et al. (2007), has mainly studied the entrepreneurship of graduates from science, technology, engineering, and mathematics (STEM) courses, largely ignoring the wide variety of other courses offered by universities and their entrepreneurial contributions to regional economic development. We aim to fill this gap by analyzing the determinants and success factors of student entrepreneurs from all types of university courses.

We analyzed secondary data on students who graduated from the University of Padova, the second-oldest university in Europe (founded in 1222)

and one of the leading universities in Italy. The university offers a broad variety of courses in the humanities, social sciences, and STEM areas. It is located in the Veneto region, one of the most innovative and productive regions in Italy, which is home to many innovative small and medium-sized manufacturing companies and start-ups (Apa et al., 2020).

We examine the strengths and weaknesses of universities as boosters of entrepreneurship and assess the role played by individual and contextual factors. We demonstrate the importance of entrepreneurial education for encouraging student entrepreneurship and of a match between field of study and sector of a start-up's activity for establishing successful companies. We also identify theoretical and managerial implications for university managers to rethink educational plans and create entrepreneurship opportunities for graduates of all university courses.

The paper proceeds as follows. Section 2 reviews the existing research on student entrepreneurship and sets out our hypotheses. Section 3 illustrates the data, methods, and results of the analysis. Section 4 discusses the results and presents some concluding remarks.

2. Student entrepreneurship

Perkmann and Walsh (2007) defined university–industry relationships as encompassing a portfolio of activities ranging from the transfer of intellectual property to licensing, patents and, finally, commercialization. However, the variety of university–industry relationships is wider than this definition suggests; it includes different types of collaborations, which can be classified according to intensity, formality, and time frame. University–industry links vary in terms of their nature and objectives and the role of public policy in their establishment (World Bank, 2013; Filippetti et al., 2017). However, they can be broadly divided into three groups: 1) academic entrepreneurship, 2) academic engagement, and 3) student entrepreneurship.

Academic entrepreneurship is "the attempt to increase individual or institutional profit, influence or prestige through the development and marketing of research ideas or research-based products" (Louis et al., 1989: 110). It includes a) patenting of academic inventions, b) licensing of academic inventions, and c) academic spin-offs. Academic entrepreneurship confers prestige on professors and universities and offers financial rewards (Shane, 2004; Etzkowitz, 2000). To facilitate the commercialization of intellectual property, many universities have technology transfer offices (TTOs), science parks, or incubators (Clarysse at al., 2005), which act as bridges between scientific knowledge and technology development.

Academic engagement is the "knowledge-related collaboration by academic researchers with non-academic organizations" (Perkmann et al.,

2013: 424) and is more widely practiced than academic entrepreneurship. It is closely aligned with traditional academic research activities and is pursued by academics to access resources to support their research agendas (Perkmann et al., 2013). It includes various forms of university–industry collaboration that are generally profitable and can be either formal or informal (Apa et al., 2020). The most common types of academic engagement are a) contract research, b) collaborative research for R&D projects involving dedicated research groups, c) consulting, and d) informal activities.

Mars et al. (2008) were the first to include student entrepreneurship among the types of university-industry linkages. This new and underinvestigated phenomenon was defined by Colombo et al. (2015) as new ventures created by students and recent graduates. The main features of student entrepreneurs are as follows: 1) They use university knowledge to recognize opportunities and develop, launch, and operate new companies to exploit them. 2) They use their university education to develop the three core capabilities that underline venture creation: opportunity refinement, resource acquisition, and venture championing. 3) They rely on their university's reputation and networks to reach the credibility thresholds of their ventures. 4) They use their university to develop weak and strong network ties. Weak ties provide them with new knowledge and information, while strong ties provide resources, legitimacy, and sensitive information exchange. Bridging ties provide market and customer information and enable entrepreneurs to expand their capabilities (Hoskisson et al., 2011).

Student start-ups account for a significant portion of the entrepreneurial activity directly stemming from universities (Astebro and Bazzazian, 2011; Åstebro et al., 2012; Breznitz and Zhang, 2019). Over the last decade, scholarly interest in entrepreneurship has increased. However, student entrepreneurship remains an under-investigated phenomenon that requires more in-depth analysis. Colombo et al. (2016) examined student entrepreneurship at Politecnico di Milano and identified the following elements that increase students' propensity to create one or more start-ups: a) a specialized course curriculum, b) a high final degree score (103/110 or higher), and c) graduating from a management or economics course. They also investigated the relationship between course curriculums and student entrepreneurship in technology-based universities, using Politecnico di Milano as a case study. Ruda et al. (2009) found that an entrepreneurial education and awareness of the assistance offered by colleges and universities encouraged students to become entrepreneurs. Many other studies also found that entrepreneurship education programs contribute to the development of entrepreneurial intentions among students (Gibb, 2002; Fayolle et al., 2006).

Universities can foster and support student entrepreneurship in many ways by offering entrepreneurship education (Bae et al., 2014) and assisting graduates with business ideas to start their own businesses. The re-

sults of a questionnaire administered to applicants of a graduate enterprise program sponsored by a training agency showed that 90% of the participants would have deferred their entrepreneurial activities by at least five years, if not forever, without the support of this program (Brown, 1990). The program supported student entrepreneurship by a) providing student entrepreneurs with access to university resources, such as laboratories, free office space, and telecommunication facilities (Mars and Rhoades, 2012); b) establishing networks with professors, who invest their expertise and money in student projects and boost the image of start-ups with their talent and prestige (Mars and Rhoades, 2012); and c) organizing business plan competitions, which enable students to access strategic networks of entrepreneurs and influential professionals to source funding for their projects (Mars and Rhoades, 2012). Our first hypothesis is as follows:

Hypothesis 1: Entrepreneurship education positively impacts student entrepreneurship.

The nature and source of students' knowledge is also a factor that affects their ability to recognize technological and market opportunities and thus entrepreneurship orientation (Kor et al., 2007). This is why STEM areas are traditionally associated with high-impact entrepreneurship. Graduates of STEM courses are viewed as major drivers of technological innovation, and universities tend to support STEM start-ups through organizations such as TTOs, business incubators, and science parks (Atkinson and Mayo, 2010). There are fewer measures targeted at non-STEM graduates, who are, therefore, often at a disadvantage when trying to start a new business. Thus, our second hypothesis is as follows:

Hypothesis 2: STEM education positively impacts student entrepreneurship.

Lent et al. (2004) first argued that learning experiences, which can include the attendance of university courses abroad, are a factor in determining students' interest in establishing new ventures. The integration of study abroad programs into university curriculums may positively impact self-efficacy, self-confidence, and the ability to adapt to new environments, all of which are attributes conducive to starting a business (Van Auken, 2013). Increasing globalization has intensified the need to combine entrepreneurship skills with foreign language proficiency and cultural awareness (Huebner, 1998). Students who study abroad for a period are more likely to be exposed to different cultural and social environments, learn different types of knowledge, and come up with new ways of reorganizing knowledge and ideas, all of which can drive innovation and entrepreneurship (Fatlin, 2018). Consequently, our third hypothesis is as follows:

Hypothesis 3: The integration of study abroad programs into university curriculums positively impacts student entrepreneurship.

Studies have reported significantly less interest in pursuing an entrepreneurial career among females than among males (Marlino and Wilson, 2003). Several factors may account for this disparity. Females generally report a lack of work experience and feel less confident and capable of initiating entrepreneurial activity than males, even when receiving the same education and coming from similar backgrounds (Petridou et al. 2009). Although the number of female entrepreneurs has increased in recent years (Brush et al., 2009; de Bruin et al., 2006), it is still lower than the number of male entrepreneurs (Dabic et al., 2012; GEM, 2010). This trend seems to hold for student entrepreneurship (Brezniz and Zhang, 2020; Duval-Couetil et al., 2014). Therefore, we expect a lower prevalence of female student entrepreneurs.

Hypothesis 4: Male graduate students are more likely than their female counterparts to become entrepreneurs.

Entrepreneurs show a tendency to establish new companies close to home, where they have established social networks. Proximity to family and friends is often the most important driver of the choice of location for a new venture and of its success. Sorenson and Audia (2000) and Dahl and Sorenson (2012) have argued that entrepreneurs tend to remain rooted in their regions of origin because personal relationships help them to raise capital, recruit employees and suppliers, and attract customers. Dahl and Sorenson (2009) coined the term "embedded entrepreneur" to describe this phenomenon. Michelacci and Silva (2007) also identified this tendency and found that entrepreneurs have an even stronger tendency than employees to remain in their regions of birth.

Hypothesis 5: The establishment of a start-up close to the place of residence of the founder positively affects the success of the venture.

Robust empirical evidence suggests that education is an important positive determinant of entrepreneurial performance, in terms of survival probability, revenue growth, occupation rate, profits, and propensity to innovate and to valorize human capital (Bates, 1999; Ferrante, 2005). Some studies have indicated that the poor economic performance of the Italian economy over the past 15 years can be partly ascribed to entrepreneurial styles and strategies determined by a poor endowment of human capital (Bugamelli et al., 2011; Schivardi and Torrini, 2011; Federici and Ferrante, 2014). Åstebro et al. (2012) observed that the probability of establishing a

successful venture is much higher when the founder's degree is closely related to the company's activity and when the founder is a graduate of a prestigious university. Therefore, our last hypothesis is as follows.

Hypothesis 6: A match between company activity and founder's degree positively affects firm performance.

3. Data and method

3.1. Data

Our research focuses on the University of Padova, an organization that strongly contributes to the development and innovativeness of the Veneto region by enhancing knowledge production and commercialization. The University of Padova promotes research and service activities at the request and in favor of third parties and in collaboration with outside entities. In a report covering the period 2004–2010, the National Research Assessment Committee ranks this university first in Italy for the quality of its research results. Padova has excellent rankings in all disciplines and is a leader in physics, earth sciences, biology, medicine, agrarian and veterinary science, industrial and information engineering, economics, and statistics.

We quantitatively analyzed secondary data retrieved from the University of Padova's statistics office and InfoCamere ScpA, the digital innovation company for the Italian Chambers of Commerce that manage the Telematic Business Register (www.registroimprese.it). The statistics office of the University of Padova provided information on 119,347 students who graduated from the University of Padova between 2000 and 2010. Personal data and information on university courses, years of enrollment and graduation, number and types of credits (ECTS), thesis titles and supervisors, final grades, and other individual and academic characteristics were collected by the administrative office through two surveys administered at the beginning and end of each student's academic life. InfoCamere ScpA provided data identifying graduates who were listed as shareholders or managers of companies on the Italian Telematic Business Register. After data cleaning, we obtained an original database containing information about graduates occupying leading positions (top managers) in companies and the entrepreneurial activity of graduates. The database consists of 6,427 companies either founded by graduates (4,172) or that employed graduates as top managers (2,255) between 2000 and 2010. For the quantitative

¹http://unipd.it/en/university/scientific-and-academic-structures/other-structures

² http://unipd.it/en/research/research-excellence

analysis, we focused first on the overall database of 119,347 graduates to investigate the factors affecting student entrepreneurship. We then focused on the performance of the 4,172 companies founded by graduates at the University of Padova.

3.2. Method⁴

This work is based on a deductive research design. It uses quantitative statistical analysis to test the hypotheses derived from a review of the literature on student entrepreneurship. To identify the factors that impact entrepreneurship as a job choice and those that influence the success of the new venture, we estimated two sets of probit models. The models include independent variables, chosen for the purpose of hypotheses testing, and control variables, which reflect factors that generally correlate with graduate entrepreneurship (e.g., final grade, length of study) (Backes-Gellner and Werner, 2007) or with firm performance (e.g., age, size, and location of company) (Arend, 2014). All variables entered in the regressions are described in the sections below.

3.2.1. Dependent variables

ENTREPR is a dummy that takes a value of 1 if the owners of the company include a graduate of the University of Padova who graduated between 2002 and 2010.

COMPSTATUS is a dummy that takes a value of 1 if the company was active in 2015 and 0 if it was inactive, in liquidation, in bankruptcy, or suspended.

3.2.2. *Independent variables*

Place of residence of the student is captured by six dummies that indicate the place of residence of the student (northeast, northwest, center, south of Italy, islands, or foreign country).

Gender (SEX) is a dummy that takes a value of 1 if the student is male and 0 otherwise.

Experience Abroad (ExpAbroad) is a dummy variable that refers to any kind of academic experience gained by the student abroad. It takes a value of 1 if the student reported experience abroad during their university attendance and 0 otherwise.

University course is captured by 13 dummies representing specific uni-

³http://unipd.it/ilbo/content/anvur-e-qualita-della-ricerca-padova-al-primo-posto-italia

⁴ A list of all the variables entered in the regression analysis is available in Table A1 in the Appendix.

versity courses. They take a value of 1 if the student attended the course.

Credits in economics exams refers to the credits accumulated by the student in each economic discipline.

Total credits in economics exams (TotCredEcon) is the sum of all credits obtained by the student in exams spanning all areas of economics.

Same Province (SameProv) represents the link between the geographic location of the company and the province of residence of the student. The dummy assumes a value of 1 if the company was founded in the same province as that of the student's residence and 0 otherwise.

Degree—Company Matching (UnivInflue) represents the link between a student's degree and their final job as an entrepreneur. The dummy takes a value of 1 if the sector of activity of the company and the university course attended by the student are connected and 0 otherwise.

3.2.3. Control variables

Company during university (CompDurUniv) refers to companies founded by students in the period between the year of enrollment and the year of graduation. The dummy assumes a value of 1 if the company was founded while the student attended university and 0 otherwise.

Years of study (YStudy) represents the number of years spent at university. It is calculated as the difference between the year of graduation and the year of enrollment.

Graduation Mark (GradMark) is a quality indicator of the academic performance of the student at the University of Padova (the range is between 70 and 110).

Location of the company captures the location of the company and is represented by five dummies, each indicating a geographic area of Italy (northeast Italy, northwest Italy, central Italy, south of Italy, or islands).

Company sector indicates the sector in which the company operates and is represented by four dummy variables, each representing a sector in line with the Italian Ateco classification.

Company age (AgeComp) is calculated as the difference between 2015 and the year the company was founded.

Company size (TotEmpl) represents the size of a company and is calculated as the total number of employees in 2015.

3.3 Results

We first estimated the factors that impact the choice of entrepreneurship as a job through two probit regression models (Table 1). The difference between model A1 and model A2 is that model A2 accounts for all the possible credits obtained through the attendance of courses on economics

subjects, while model A1 counts the overall credits obtained in economics subjects. We can observe that entrepreneurial activities are mainly conducted by males who completed their course of study on time. Neither grades nor experiences abroad were found to be significant drivers of entrepreneurship. Hypothesis 4 is therefore confirmed since there is a gender gap in entrepreneurial choice. However, Hypothesis 3 is not confirmed since the choice of entrepreneurship as a career is not linked to educational experience abroad.

The course of study a student attended was found to influence their probability of becoming an entrepreneur. The descriptive statistics show that engineering students founded the most companies. However, agricultural science had the highest proportion of entrepreneurs per students registered. Hypothesis 2 is therefore confirmed, as STEM students were more likely to choose to establish a new venture after graduation.

Hypothesis 1 is also confirmed, since the number of credits obtained by attending courses in economic disciplines positively impacted the probability of becoming an entrepreneur, and, as model A2 shows, the results differed across economics courses. We also found geographical differences indicating that the students' place of residence impacted their entrepreneurial actions.

Tab. 1: Estimation of the probability of becoming an entrepreneur

	Model A1			Model A2	
	Robust			Robust	
Coef.	Std. Err.		Coef.	Std. Err.	
-0.75909	(0.18)	***	-0.83277	(0.21)	***
0.463305	(0.02)	***	0.463843	(0.02)	***
-0.04319	(0.01)	***	-0.04418	(0.01)	***
-0.01541	(0.00)	***	-0.01559	(0.00)	***
-0.1362	(0.05)	***	-0.14077	(0.05)	***
0.758381	(0.09)	***	0.820203	(0.14)	***
(omitted)			(omitted)		
0.726306	(0.11)	***	0.808747	(0.15)	***
0.163094	(0.10)		0.306443	(0.15)	**
0.029101	(0.09)		0.144748	(0.14)	
0.403623	(0.09)	***	0.484336	(0.14)	***
0.295991	(0.09)	***	0.377276	(0.14)	***
0.865248	(0.12)	***	0.94715	(0.16)	***
0.109813	(0.09)		0.187194	(0.14)	
0.153608	(0.10)		0.222827	(0.15)	
	-0.75909 0.463305 -0.04319 -0.01541 -0.1362 0.758381 (omitted) 0.726306 0.163094 0.029101 0.403623 0.295991 0.865248 0.109813	Robust Coef. Std. Err. -0.75909 (0.18) 0.463305 (0.02) -0.04319 (0.01) -0.01541 (0.00) -0.1362 (0.05) 0.758381 (0.09) (omitted) 0.726306 (0.11) 0.163094 (0.10) 0.029101 (0.09) 0.403623 (0.09) 0.295991 (0.09) 0.865248 (0.12) 0.109813 (0.09)	Robust Coef. Std. Err. -0.75909 (0.18) *** 0.463305 (0.02) *** -0.04319 (0.01) *** -0.01541 (0.00) *** -0.1362 (0.05) *** 0.758381 (0.09) *** (omitted) 0.726306 (0.11) *** 0.163094 (0.10) 0.029101 (0.09) 0.403623 (0.09) *** 0.295991 (0.09) *** 0.865248 (0.12) *** 0.109813 (0.09)	Robust Coef. Std. Err. Coef. -0.75909 (0.18) *** -0.83277 0.463305 (0.02) *** 0.463843 -0.04319 (0.01) *** -0.01559 -0.1362 (0.05) *** -0.14077 0.758381 (0.09) *** 0.820203 (omitted) (omitted) 0.726306 (0.11) *** 0.808747 0.163094 (0.10) 0.306443 0.029101 (0.09) 0.144748 0.403623 (0.09) *** 0.377276 0.865248 (0.12) *** 0.94715 0.109813 (0.09) 0.187194	Robust Robust Coef. Std. Err. Coef. Std. Err. -0.75909 (0.18) *** -0.83277 (0.21) 0.463305 (0.02) *** 0.463843 (0.02) -0.04319 (0.01) *** -0.04418 (0.01) -0.01541 (0.00) *** -0.01559 (0.00) -0.1362 (0.05) *** -0.14077 (0.05) 0.758381 (0.09) *** 0.820203 (0.14) (omitted) (omitted) (omitted) 0.726306 (0.11) *** 0.808747 (0.15) 0.163094 (0.10) 0.306443 (0.15) 0.029101 (0.09) 0.144748 (0.14) 0.403623 (0.09) *** 0.484336 (0.14) 0.295991 (0.09) *** 0.377276 (0.14) 0.865248 (0.12) *** 0.94715 (0.16) 0.109813 (0.09) 0.187194 (0.14)

SC_MAT	0.218542	(0.09)	**	0.311524	(0.14)	**
SC_POL	0.391698	(0.08)	***	0.564432	(0.13)	***
SC_STAT	0.216877	(0.10)	**	0.293066	(0.16)	*
TotCredEcon	0.003731	(0.00)	***	-	-	
NCrIngEco	-	-		-0.00134	(0.00)	
NCrPolEcon	-	-		-0.00318	(0.00)	
NCrFinScien	-	-		-0.01894	(0.01)	*
NCrHistor	-	-		-0.02345	(0.02)	
NCrEcmetrx	-	-		-0.00332	(0.02)	
NCrAdvEcon	-	-		-0.00597	(0.01)	
NCrAccount	-	-		0.008488	(0.00)	*
NCrManag	-	-		0.013254	(0.00)	***
NCrBusinFin	-	-		-0.01305	(0.03)	
NCrCompMan	-	-		0.026895	(0.01)	***
NCrIntermed	-	-		-0.0053	(0.01)	
NCrHistEcon	-	-		-0.00843	(0.01)	
NcrProdScien	-	-		0.37313	(0.14)	***
StNW	(omitted)			(omitted)		
StNE	0.230384	(0.05)	***	0.232017	(0.05)	***
StCentre	0.648827	(0.07)	***	0.647114	(0.07)	***
StSouth	0.552411	(0.05)	***	0.553938	(0.05)	***
StIslands	0.663123	(0.06)	***	0.665544	(0.06)	***
StForeign	-0.26203	(0.14)	*	-0.24544	(0.14)	*
Number of obs		64359			64359	
Wald chi2(34)		1263.72			1311.78	
Pseudo R2		0.0792			0.0819	
Log pseudolikelihood		-8154.46			-8130.5	

Source: our elaboration

Second, we investigated the factors affecting the success of the new ventures through another two probit regression models (Table 2). The main difference between model B2 and model B1 is that model B2 accounts for the sector of activity of the company. We found that success is not linked to gender or to the quality of the students (measured as graduation mark). Surprisingly, we found a negative relationship between venture success and experience abroad. This raises questions regarding students' motivations for embarking on an Erasmus program. Another unexpected result was a negative impact of credits in economics subjects, which might be explained by the fact that students without an economics background may engage in master's courses or network with more experienced people to fill

gaps in their skill set. It appears that the entrepreneurial education currently offered to students is not enough to guarantee a successful future as an entrepreneur. It was also surprising to find that, in contrast to Hypothesis 5, proximity between the founder's place of residence and the location of the firm was not correlated with a company's success.

However, the fitness between the company activities and the type of university course attended does appear to positively affect the success of entrepreneurial ventures. Therefore, Hypothesis 6 is confirmed.

Tab. 2: Estimation of the probability of founding a successful company

Probit		Model B1			Model B2	
		Robust			Robust	
CompStatus	Coef.	Std. Err.		Coef.	Std. Err.	
_cons	1.780838	(0.96)	*	1.929639	(0.99)	*
SEX	0.044668	(0.12)		0.044109	(0.12)	
YStudy	0.006909	(0.04)		0.006868	(0.04)	
GradMark	-0.0053	(0.01)		-0.00498	(0.01)	
ExpAbroad	-0.41837	(0.25)	*	-0.3985	(0.25)	
TotCredEcon	-0.00672	(0.00)	**	-0.00678	(0.00)	**
AGR	0.247669	(0.30)		0.316624	(0.31)	
ECON	(omitted)			(omitted)		
PHARM	0.19673	(0.33)		0.198663	(0.33)	
LAW	0.065761	(0.39)		0.085902	(0.39)	
ENG	0.307066	(0.26)		0.313182	(0.26)	
LIT	0.246319	(0.30)		0.249823	(0.30)	
MED_CH	0.200057	(0.27)		0.228199	(0.27)	
MED_VET	0.310078	(0.30)		0.331405	(0.30)	
PSYC	0.239956	(0.28)		0.247039	(0.28)	
SC_FORM	0.473272	(0.38)		0.477989	(0.38)	
SC_MAT	-0.04552	(0.29)		-0.03318	(0.29)	
SC_POL	0.233352	(0.28)		0.249325	(0.28)	
SC_STAT	0.309216	(0.42)		0.306825	(0.42)	
SameProv	-0.05944	(0.13)		-0.05285	(0.13)	
UnivInflue	0.589779	(0.15)	***	0.588111	(0.15)	***
CompDurUniv	0.422644	(0.30)		0.422813	(0.30)	
AgeComp	0.038934	(0.02)	**	0.040005	(0.02)	***
TotEmpl	-0.00312	(0.01)		-0.00375	(0.01)	
CoNE	(omitted)			(omitted)		
CoNW	0.056981	(0.22)		0.050959	(0.22)	
CoCentre	-0.47702	(0.22)	**	-0.48086	(0.21)	**
CoSouth	-0.38362	(0.19)	**	-0.39017	(0.19)	**

CoIslands	-0.34528	(0.23)	-0.33653	(0.23)	
A			-0.43309	(0.31)	
X			-0.08533	(0.31)	
SO			-0.20194	(0.26)	
Number of obs		1735		1735	
Wald chi2(34)		48.97		57.83	
Pseudo R2		0.0936		0.0971	
Log pseudolikelihood		-302.105		-300.949	

Source: our elaboration

4. Discussion and conclusions

The aim of this work was to analyze the factors affecting the choice of entrepreneurship as a career among graduates of the University of Padova (student entrepreneurs) and identify the drivers of successful company foundation by student entrepreneurs. We performed a quantitative analysis on a secondary database built for the purpose of this study, which includes information on 119,347 students who graduated from the University of Padova between 2000 and 2010 and identifies those who became entrepreneurs. We discovered that 4,172 graduates founded a company in Italy. By estimating two sets of probit models, we obtained insights that are relevant for theory and practice. Based on our investigations, we profiled student entrepreneurs and identified the determinants of a successful start-up.

The analysis revealed the following features of student entrepreneurship: 1) It is gender-biased, as the majority of entrepreneurs are male. 2) It is positively correlated with entrepreneurship education. 3) It is dependent on the university course attended by the student, with STEM courses producing more entrepreneurs. 4) It is negatively affected by a period of study abroad.

Regarding the gender imbalance, our results align with those of previous studies, which have emphasized the gender gap in entrepreneurial activities in general and in student entrepreneurship in particular (Brezniz and Zhang, 2020; Duval-Couetil et al., 2014). Similarly, with respect to the impact of entrepreneurship education on student entrepreneurship, our results support previous research, which has indicated a positive effect (Gibb, 2002; Fayolle et al., 2006). Regarding the type of course attended, our findings help to clarify the inconsistent results of previous research with respect to the links between STEM education and entrepreneurial action. In fact, some scholars have suggested that the high demand for STEM students in the job market hampers student entrepreneurship (Delmar and Wennberg, 2010; Alves et al., 2019). Surprisingly, in contrast to the findings of previous research on combining entrepreneurship education with a period of study abroad, we found experience attending university courses abroad did not support student entrepreneurship.

Our analysis of the determinants of a successful business revealed other relevant factors: 1) Venture success is positively associated with the proximity between the type of activities performed by the company and the type of university course attended. 2) Success is not influenced by the proximity between the place of residence of the founder and the location of the start-up.

In line with the findings of Åstebro et al. (2012), we found that the success of a graduate's business is associated with a match between the field of activity of the company and the type of university course attended. Although proximity to family and friends is known to be the main driver for choosing the location of a start-up, our work provides evidence that this is not a factor that determines the success of start-ups.

We contribute to previous literature on the topic by extending our analysis beyond STEM courses and considering a broad range of factors not only to identify the drivers of entrepreneurship as a career choice but also to understand the main determinants of successful student entrepreneurship. Only by combining these two important aspects (the choice to become an entrepreneur and venture performance) is it possible to obtain a complete picture of the student entrepreneurship phenomenon.

Regarding managerial implications, this research can contribute to the creation of a portfolio of solutions to improve university offerings in terms of new events, courses, and meta-organizations to support students in establishing new businesses and extend them beyond the science and technology area. Specific initiatives for female graduates would ensure inclusiveness. Furthermore, student experiences abroad should not be limited to university courses but should extend to study tours to foreign companies and internships. University managers should radically rethink universities' educational offerings and the objectives of university—industry interventions.

Successful graduate start-ups are strongly influenced by a match between the company's field of operations and the university course attended by the founder. Students' exposure to business opportunities close to their field of study might increase the probability of them establishing successful companies. Therefore, universities should think about developing new ways of interacting with the industry that extend beyond the services provided by traditional TTOs. They should explore new informal channels based on personal relationships and customized research projects, with the participation of soft science university courses.

Before concluding, we acknowledge a few limitations of the study and propose avenues for future research. First, our analysis is based on student start-ups at a single university. Therefore, caution should be used when generalizing the findings. However, to the best of our knowledge, no other study has gathered comparable data from other universities.

Further research could extend the analysis of this study to other Italian universities to obtain a deeper understanding of the student entrepreneurship phenomenon. This would provide a high-resolution panoramic picture of the national situation. As entrepreneurship is one of the main engines of national development, it would be useful to understand why only 3% of students who graduated from the University of Padova between 2000 and 2010 decided to establish a firm, while 97% decided to work for other firms. Although this percentage is largely reflective of similar for other universities, it is still not clear why it is so low. Since one of the aims of both universities and governments is to study and promote entrepreneurship, we must find a way to change this scenario. The literature on university entrepreneurship widely recognizes its importance but, to date, has offered little data on student start-ups. This research offers some food for thought regarding urgent actions to foster student entrepreneurship to facilitate university–industry collaborations more generally.

References

Alves, A.C., Fischer, B., Schaeffer, P.R. and Queiroz, S. (2019), Determinants of student entrepreneurship: An assessment on higher education institutions in Brazil, *Innovation & Management Review*, 16 (2), 96-117. https://doi.org/10.1108/INMR-02-2018-0002

Apa R., De Marchi V., Grandinetti R., Sedita S.R. (2020) University-SME collaboration and innovation performance: the role of informal relationships and absorptive capacity, *Journal of Technology Transfer*, https://doi.org/10.1007/s10961-020-09802-9.

Arend, R. J. (2014). Entrepreneurship and dynamic capabilities: how firm age and size affect the 'capability enhancement–SME performance' relationship. *Small Business Economics*, 42(1), 33-57.

Åstebro T., Bazzazian N. (2011), Universities, entrepreneurship and local economic development, in Fritsch M. (ed.), *Handbook of Research on Entrepreneurship and Regional Development: National and Regional Perspective*. Edward Elgar: Cheltenham, pp. 252–333.

Ästebro, T., Bazzazian, N., & Braguinsky, S. (2012). Startups by recent university graduates and their faculty: Implications for university entrepreneurship policy. *Research Policy*, 41(4), 663-677.

Atkinson, R. D., & Mayo, M. (2010). Refueling the U.S. innovation economy: fresh approaches to Science, Technology, Engineering and Mathematics (STEM) education. https://www.itif.org/files/2010-refueling-innovation-economy.pdf.

Baba Y., Shichijo N., Sedita S.R. (2009) How Do Collaborations with Universities Affect Firms' Innovative Performance? The Role of Pasteur Scientists in the Advanced Materials Field, *Research Policy*, vol. 38 (5), pp. 756-764.

Backes-Gellner, U., Werner, A. (2007). Entrepreneurial signaling via education: A success factor in innovative start-ups. *Small Business Economics*, 29(1-2), 173-190.

Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta □ analytic review. *Entrepreneurship Theory and Practice*, 38(2), 217-254.

Bates, T. (1999). Exiting Self-Employment: An Analysis of Asian Immigrant-Owned Small Business. Small Business Management, 13, 171-183.

Breznitz S.M., Zhang Q. (2019), Fostering the growth of student start-ups from university accelerators: an entrepreneurial ecosystem perspective, *Industrial and Corporate Change*, 28 (4), 855–873, https://doi.org/10.1093/icc/dtz033.

Brown, R. (1990). Encouraging enterprise: Britain's graduate enterprise program. *Journal of Small Business Management*, 28(4), 71-77.

Bugamelli M., Cannari L., Lotti L. e Magri S. (2012). "The innovation gap of Italy's production system: roots and possible solutions". Bank of Italy.

Chesbrough, H. W. (2006). Open innovation: The new imperative for creating and profiting from technology. Harvard Business Press.

Clarysse, B., Wright, M., Lockett, A., Van de Velde, E., & Vohora, A. (2005). Spinning out new ventures: a typology of incubation strategies from European research institutions. *Journal of Business venturing*, 20(2), 183-216.

Colombo M.G., Piva E., Rossi-Lamastra C. (2016). "Student entrepreneurs from technology-based universities: the impact of course curriculum on entrepreneurial entry". Working paper

Colombo, M. G., Piva E., Rossi-Lamastra C. (2015). Student Entrepreneurs from technology-based universities: the impact of course curriculum on entrepreneurial entry. Conference at Politecnico di Milano.

Dabic, M., Daim, T., Bayraktaroglu, E., Novak, I., & Basic, M. (2012). Exploring gender differences in attitudes of university students towards entrepreneurship. *International Journal of Gender and Entrepreneurship*.

Dahl, M. S., & Sorenson, O. (2009). The embedded entrepreneur. *European Management Review*, 6(3), 172-181.

Dahl, M. S., and Sorenson, O. (2012). Home sweet home: Entrepreneurs' location choices and the performance of their ventures. *Management Science*, 58(6), 1059-1071.

Delmar, F. and Wennberg, K. (2010), Knowledge Intensive Entrepreneurship: The Birth, Growth and Demise of Entrepreneurial Firms, Edward Elgar Publishing, Cheltenham.

Duval-Couetil, N., C. M. Gotch, and S. Yi (2014). The Characteristics and Motivations of Contemporary Entrepreneurship Students, *Journal of Education for Business*, 89(8), 441–449.

Etzkowitz, H., Webster, A., Gebhardt, C., & Terra, B. R. C. (2000). The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm. *Research Policy*, 29(2), 313-330.

Fatlin, G. (2018). Brains versus capital: entrepreneurship for everyone. Singapore: World Scientific.

Fayolle A., Gailly B., Lassas-Clerc N. (2006), Assessing the impact of entrepreneurship education programmes: a new methodology, *Journal of European Industrial Training*, 30 (9), 701–720.

Federici, D., and Ferrante, F. (2014). "Ristrutturazione industriale e capital umano imprenditoriale". *Economia dei Servizi*, n.3, 233-258.

Feller, I. (1990). Universities as engines of R&D-based economic growth: They think they can. *Research Policy*, 19(4), 335-348.

Ferrante F. (2005). "Revealing Entrepreneurial Talent". Small Business Economics, vol. 2, September, p. 159-174.

Filippetti, A., Savona, M. (2017). University–industry linkages and academic engagements: individual behaviours and firms' barriers. Introduction to the special section. Journal of Technology Transfer, 42 (4), 719–729. https://doi.org/10.1007/s10961-017-9576-x

Gibb, A. (2002). In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge. *International Journal of Management Reviews*, 4(3), 233-269.

Hoskisson, R. E., Covin, J., Volberda, H. W., & Johnson, R. A. (2011). Revitalizing entrepreneurship: The search for new research opportunities. *Journal of Management Studies*, 48(6), 1141-1168.

Hsu, D. H., Roberts, E. B., & Eesley, C. E. (2007). Entrepreneurs from technology-based universities: Evidence from MIT. *Research Policy*, 36(5), 768-788.

Huebner, T. (1998). Methodological considerations in data collection for language learning in a study abroad context. *Frontiers*, 4(1), 1–30.

Kor, Y.Y., Mahoney, J.T. and Michael, S.C. (2007), "Resources, capabilities and entrepreneurial perceptions", *Journal of Management Studies*, Vol. 44 No. 7, pp. 1187-1212.

Lent, R., Brown, S., & Hackett, G. (2004). "Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79–122

Louis K. S., Blumenthal D., Gluck M. E., Stoto M. A. (1989) Entrepreneurs in Academe: An Exploration of Behaviors among Life Scientists, in "Administrative Science Quarterly", 34, 110-131.

Mansour D., Sedita S.R., Apa R. (2018) Dynamics of Entrepreneurship in Egypt: Assessing the Entrepreneurial Ecosystem. Can Entrepreneurship Contribute to the Economic Development in Egypt? In Faghih N., Zali M.R. (eds.) *Entrepreneurship Ecosystem in the Middle East and North Africa (MENA) - Dynamics in Trends, Policy and Business Environment*. Cham, Springer, pp. 519-542.

Marlino, D. and Wilson, F. (2003), Teen Girls on Business: Are They Being Empowered? Full Report, Simmons School of Management and the Committee of 200, Boston, MA.

Mars, M. M., & Rhoades, G. (2012). Socially oriented student entrepreneurship: A study of student change agency in the academic capitalism context. *The Journal of Higher Education*, 83(3), 435-459.

Mathisen, M. T., & Rasmussen, E. (2019). The development, growth, and performance of university spin-offs: A critical review. *The Journal of Technology Transfer*, 44(6), 1891-1938.

Michelacci, C., & Silva, O. (2007). Why so many local entrepreneurs?. *The Review of Economics and Statistics*, 89(4), 615-633.

O'Connor A., Stam E., Sussan F., Audretsch D.B. (2018) Entrepreneurial Ecosystems: The Foundations of Place-based Renewal. In: O'Connor A., Stam E., Sussan F., Audretsch D. (eds) *Entrepreneurial Ecosystems. International Studies in Entrepreneurship*, vol 38. Springer, Cham. https://doi.org/10.1007/978-3-319-63531-6 1.

Perkmann, M., & Walsh, K. (2007). University–industry relationships and open innovation: Towards a research agenda. *International Journal of Management Reviews*, 9(4), 259-280.

Perkmann, M., Tartari, V., McKelvey, M., Autio, E., Broström, A., D'Este, P.,... & Krabel, S. (2013). Academic engagement and commercialisation: A review of the literature on university–industry relations. *Research Policy*, 42(2), 423-442.

Petridou, E., Sarri, A. and Kyrgidou, L.P. (2009), Entrepreneurship education in higher educational institutions: the gender dimension, *Gender in Management*, 24 (4), 286-309. https://doi.org/10.1108/17542410910961569.

Rasmussen, E., Mosey, S., & Wright, M. (2011). The evolution of entrepreneurial competencies: A longitudinal study of university spin off venture emergence. *Journal of Management Studies*, 48(6), 1314-1345.

Rothaermel, F. T., Agung, S. D. and Jing, L. (2007). 'University entrepreneurship: a taxonomy of the literature'. *Industrial and Corporate Change*, 16, 691–791.

Ruda, W., Martin, T. A., & Danko, B. (2009). Target group-specific design of student entrepreneurship support–A German example focusing on start-up motives and barriers. *Acta Polytechnica Hungarica*, 6(3), 5-22.

Schivardi F. e Torrini R. (2011). "Structural change and human capital in Italy's productive economy", Questioni di Economia e Finanza (Occasional Papers) 108, Bank of Italy.

Shane, S. A. (2004). Academic entrepreneurship: University spinoffs and wealth creation. Edward Elgar Publishing.

Sorenson, O., and Audia, P. G. (2000). The social structure of entrepreneurial activity: Geographic concentration of footwear production in the United States, 1940–1989. *American Journal of Sociology*, 106(2), 424-462.

Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566-591.

Van Auken, H. (2013). Influence of a culture-based entrepreneurship program on student interest in business ownership. *International Entrepreneurship and Management Journal*, 9(2), 261-272.

World Bank (2013). Promoting University-Industry Collaboration in Developing Countries, The Innovation Policy Platform

Zucker, L. G., & Darby, M. R. (1996). Star scientists and institutional transformation: Patterns of invention and innovation in the formation of the biotechnology industry. *Proceedings of the National Academy of Sciences*, 93(23), 12709-12716.

APPENDIX

Tab. 1: List of variables included in the secondary data analysis

Label	Type	Description
Entrepr	Dependent Variable	Dummy(0,1): Assumes value 1 if the student became an entrepreneur
CompStatus	Dependent Variable	Dummy(0,1): Assumes value 1 if the company is active in 2015 and 0 otherwise (inactive, in liquidation, in bankruptcy or suspended)
Male	Independent variable	Dummy(0,1): Assumes value 1 if the student is a male
YStudy	Independent variable	Difference between the year of graduation and the year of enrolment at the university
GradMark	Independent variable	Graduation mark
ExpAbroad	Independent variable	Dummy(0,1): Assumes value 1 if the student made an experience abroad during the university
AGR		Dummy(0,1) that assumes value 1 if the student is enrolled in the Agronomy course
ECON		Dummy(0,1) that assumes value 1 if the student is enrolled in an Economics course
PHARM		Dummy(0,1) that assumes value 1 if the student is enrolled in the Pharmacy course
LAW		Dummy(0,1) that assumes value 1 if the student is enrolled in the Law course
ENG		Dummy(0,1) that assumes value 1 if the student is enrolled in an Engineering course
LIT		Dummy(0,1) that assumes value 1 if the student is enrolled in a Philosophy and Letters course
MED_CH	Independent variable	Dummy(0,1) that assumes value 1 if the student is enrolled in the Medicine and Surgery course
MED_VET		Dummy(0,1) that assumes value 1 if the student is enrolled in the Veterinary medicine course
PSYC		Dummy(0,1) that assumes value 1 if the student is enrolled in the Psychology course
SC_FORM		Dummy(0,1) that assumes value 1 if the student is enrolled in the Education Sciences course
SC_MAT		Dummy(0,1) that assumes value 1 if the student is enrolled in a Physical and Natural Sciences course
SC_POL		Dummy(0,1) that assumes value 1 if the student is enrolled in a Political Science course
SC_STAT		Dummy(0,1) that assumes value 1 if the student is enrolled in a Statistical Sciences course
	Entrepr CompStatus Male YStudy GradMark ExpAbroad AGR ECON PHARM LAW ENG LIT MED_CH MED_VET PSYC SC_FORM SC_MAT SC_POL	Entrepr Dependent Variable CompStatus Dependent Variable Male Independent variable YStudy Independent variable GradMark Independent variable ExpAbroad Independent variable AGR ECON PHARM LAW ENG LIT MED_CH Independent variable MED_VET PSYC SC_FORM SC_POL

Location of the company	CoNW		Dummy(0,1): Assumes value 1 if the company is located in the northwest of Italy
	CoNE		Dummy(0,1): Assumes value 1 if the company is located in the northeast of Italy
	CoCentre	Independent variable	Dummy(0,1): Assumes value 1 if the company is located in the centre of Italy
	CoSouth		Dummy(0,1): Assumes value 1 if the company is located in the south of Italy
	CoIslands		Dummy(0,1): Assumes value 1 if the company is located in Sicily or in Sardinia
Place of residence of the student	StNW		Dummy(0,1): Assumes value 1 if the student lives in the northwest of Italy
	StNE		Dummy(0,1): Assumes value 1 if the student lives in the northwest of Italy
	StCentre	Independent variable	Dummy(0,1): Assumes value 1 if the student lives in the centre of Italy
	StSouth	variable	Dummy(0,1): Assumes value 1 if the student lives in the south of Italy
	StIslands		Dummy(0,1): Assumes value 1 if the student lives in Sicily or in Sardinia
	StForeign		Dummy(0,1): Assumes value 1 if the student lives in a foreign country
Same province	SameProv	Independent variable	Dummy(0,1): Assumes value 1 if the company was founded in the same province of residence of the student
University influence (consistency)	UnivInflue	Independent variable	Dummy(0,1): Assumes value 1 if the sector of activity of the company and the university course attended by the student are consistent
Company created during university	CompDurUniv	Independent variable	Dummy(0,1): Assumes value 1 if the company was founded during the university
Age company	AgeComp	Independent variable	Difference between 2015 and the year of foundation of the company
Total employees	TotEmpl	Independent variable	Total number of employees of the company at 2015
Company sector	A		Dummy(0,1): Assumes value 1 if the company operates in the agriculture, forestry and fishing sector
	С	Independent	Dummy(0,1): Assumes value 1 if the company operates in the manufacturing sector
	X	variable	Dummy(0,1): Assumes value 1 if the company operates in an unclassified sector
	SO		Dummy(0,1): Assumes value 1 if the company operates in all the other sectors

Credits received in economics exams	NCrIngEco		Credits in Economic Engineering
	NCrPolEcon		Credits in Economic Policy
	NCrFinScien		Credits in Financial Science
	NCrHistor		Credits in History of economic thought
	NCrEcmetrx	Independent variable unt eg hFin pMan	Credits in Econometrics
	NCrAdvEcon		Credits in Applied Economics
	NCrAccount		Credits in Business administration
	NCrManag		Credits in Economics and business management
	NCrBusinFin		Credits in Corporate finance
	NCrCompMan		Credits in Corporate organization
	NCrIntermed		Credits in Economics of Financial Intermediaries
	NCrHistEcon		Credits in Economic history
	NcrProdScien		Credits in Product science
Total credits in economics exams	TotCredEcon	Independent variable	Sum of the credits in all the exams listed above



Rivista Piccola Impresa/Small Business n. 1. anno 2021



Codice ISSN 0394-7947 - ISSNe 2421-5724

FOSTERING STUDENT ENTREPRENEURIAL SKILLS IN SSHS. THE CASE OF "IMPRESA IN AULA"

Mara Cerquetti University of Macerata mara.cerquetti@unimc.it

Angela Cossiri University of Macerata angela.cossiri@unimc.it Lorenzo Compagnucci University of Macerata lorenzo.compagnucci@unimc.it

> Giacomo Gistri University of Macerata giacomo.gistri@unimc.it

Francesca Spigarelli University of Macerata francesca.spigarelli@unimc.it

Article info

Date of receipt: 25/01/2020 Acceptance date: 14/09/2020

Keywords: Soft skills; Entrepreneurship education; Social sciences and humanities

doi: 10.14596/pisb.2825

Abstract

This paper paper focuses on the role of universities in stimulating students' entrepreneurial skills. After analysing innovations introduced by European policies, the study discusses the main limitations of the scientific debate on entrepreneurship competences and education. Aiming to fill this gap, the research presents the results of a survey involving 75 students of the University of Macerata (Italy), who participated and did not participate in "IMpresa INaula", a project promoted by the Regional Government of the Marche Region in 2019. The quali-quantitative research allows both to measure students' personal, interpersonal and technical skills and investigate teamwork propensity and participants' perception of "IMpresa INaula". The study aims at understanding the correlation between student participation in experiential learning activities and the development of soft skills, also providing practical recommendations for implementing entrepreneurship education in the field of social sciences and humanities.

1. Introduction

Over the last ten years, soft skills have become a buzzword in the academic debate on Student Entrepreneurship (SE) and Entrepreneurial Education (EE). Universities all over the world have been discussing how to provide students with transversal knowledge and competences needed to cope with both competitiveness and global challenges in different professional fields.

To succeed in a continually changing labour market and achieve high work performances, young generations are required to integrate their technical hard skills with soft skills, meant as a set of knowledge, abilities, competences, attitudes, motivations, values, character attributes and experiences that emerge when a person reacts to the demands of the environment (Carlotto, 2015, p. 29). Graduates who have acquired and developed these skills, particularly entrepreneurial skills, are not only more employable but also better able to obtain and retain jobs.

The present research moves from these assumptions to analyse the role of universities in stimulating students' entrepreneurship competences. The in-depth examination of the recent innovations introduced by European policies suggests that EE should be addressed to students in different fields, including social sciences and humanities (SSHs), to develop holistic personal soft skills and attitudes, rather than providing specific tools solely for students in business studies (Section 2). In this context, the paper discusses the scientific literature on entrepreneurship competences and education, pointing out the main gaps in the current state of theoretical and field research (Section 3). In particular, the need to measure the effectiveness and impact of Entrepreneurship Education Programmes (EEPs) is highlighted, such as experiential learning activities carried out in the field of SSHs. Aiming to fill this gap, a case study is provided, discussing the results of a survey involving undergraduate and postgraduate students of the University of Macerata (UniMC, Italy), a university founded on SSHs (Section 4).

The questionnaire was addressed to students who participated and did not participate in "IMpresa INaula", a European project promoted by the Regional Government of the Marche Region in 2019. The survey measured students' creativity, competence, communication skills, risk aversion, autonomy, goal attainment, empathy and trust by adopting marketing scales and open questions. On the basis of the existing scientific literature, the study seeks to investigate the following research questions:

- 1. Is there a positive correlation between the participation in experiential learning activities and the development of soft skills in students in SSHs?
- 2. Does experiential learning equally contribute to the development of personal, interpersonal and technical skills?

3. What practical recommendations can be drawn for implementing entrepreneurship education in universities founded on SSHs?

Conclusions focus on policy implications and future research directions (Section 5).

2. Research context and rationale

EE has been considered in the supranational ambit since 2000 by non-binding acts, aimed to suggest a line of action without imposing any legal obligation on those to whom they are addressed. This kind of acts, while not having a legal effect, can have not under-valuable political and cultural impacts, raising public opinion and decision-makers, enhancing public debate and often modifying national policies, at least in their general direction.

Education and training for entrepreneurship entered the European vocabulary with *The European Charter for Small Enterprises*, approved by the Feira European Council (European Council, 2000). In 2003, the Commission led by Romano Prodi launched a public debate by publishing the first *Green Paper "Entrepreneurship in Europe"*, which includes education as a fundamental factor (EC, 2003a). According to the document, education and training should contribute to encouraging entrepreneurship, by fostering the right mindset, awareness of career opportunities as an entrepreneur and skills. Considering that both personality and management skills are crucial elements for success, personal skills relevant to entrepreneurship should be taught from an early stage and be maintained up to university level. Within universities, entrepreneurship training should not only be for MBA students, but it should also be available for students in other fields.

According to the Summary Report *The public debate following the Green Paper "Entrepreneurship in Europe"*, "entrepreneurship education should be a full part of school curricula" (EC, 2003b, p. 5). In particular, EE should favour the development of a variety of useful skills and personality traits: curiosity, openness to continuous learning, proactive attitude, self-reliance and creativity, problem-solving, critical thinking and interpersonal skills. The report strongly recommended not only to combine school and work, but also to include entrepreneurship in all non-commercial educational paths.

In February 2005, the Barroso Commission proposed a new start for the Lisbon Strategy, focusing the European Union's efforts on delivering stronger growth and providing more and better jobs (EC, 2005a). *The integrated guidelines for growth and jobs* (2005-2008) (EC, 2005b) stress a more entrepreneurial culture in support to SMEs: among other measures, Member States should reinforce EE and training (cross-reference to the relevant employment guidelines).

In the European Youth Pact, the European Council called on the Union and the Member States, each within the limits of its powers, to encourage young people to develop entrepreneurship and to promote the emergence of young entrepreneurs, also expanding the scope for students to undertake a period of study in another Member State (European Council, 2005, Annex I).

In 2006, the so-called *Oslo Agenda for Entrepreneurship Education in Europe* was approved (EC, 2006b). It contains a set of specific proposals that define how to support progress in the field of EE through systematic and effective actions to be implemented at European, national and regional levels (EC, 2006a).

Since 2006, through the Recommendation on key competences for lifelong *learning*, sense of initiative and entrepreneurship has been considered one of the eight key competences that everyone needs for personal fulfilment and development, active citizenship, social inclusion and employment (European Parliament and Council of the European Union, 2006). This act was replaced by *Council recommendations* in 2018 (Council of the European Union, 2018). According to the most recent definition, entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. This competence can be applied in any sphere of life and is founded upon creativity, critical thinking and problem-solving, taking the initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or financial value (JRC, 2016). An entrepreneurial attitude is characterised by a sense of initiative, being forward-looking, courage and perseverance in achieving objectives, desire to motivate others and value their ideas, empathy and taking care of people and the world, accepting responsibility and taking ethical approaches throughout the process.

The *Entrepreneurship 2020 Action Plan* (EC, 2013) identified EE as one of the three pillars to support entrepreneurial growth in Europe. On the basis of empirical research (Jenner, 2012), the European Commission considers that investing in EE is one of the highest return investments that could be made. Several Member States have successfully introduced national strategies for EE or made entrepreneurial learning a mandatory part of curricula. However, there is plenty of room for improvement. In particular, learning outcomes for all educators have to be achieved, and Universities should become more entrepreneurial (Dabić, 2019).

Against this backdrop, the European Commission, in collaboration with OECD, developed *A guiding framework for entrepreneurial universities* (EC and OECD, 2012). The framework is designed to help universities assess themselves and improve their capability with tailor-made learning modules. Furthermore, members States are invited, *inter alia*, to boost entrepreneurial training for young people and adults in education through Structural Funds resources in line with the national job plans (European Parliament, 2015; Council of the European Union, 2015).

During this period, several comparative analyses on public policies were undertaken at the national level. In one of the most significant, *En*-

trepreneurship Education: A Road to Success (EC, 2015), the impact created by both specific and broader strategies was examined, concluding that where these strategies and actions are put in place, there is a positive impact on the person, on the training institutes, on the economy and on society.

Recently, in April 2019, the European Parliament Committee on Culture and Education published the *Activity Report 2014-2019* (European Parliament's Committee on Culture and Education, 2019), calling on the Council and the Commission to develop methodological support and tools for national education systems in the area of EE and training, including social entrepreneurship, in particular to establish entrepreneurial traineeships and exchange programmes to give young people hands-on experience; support partnerships between educational institutions and companies via the use of the European Fund for Strategic Investment and the European Social Fund.

In European countries, the situation is slightly varied. On the one hand, in some States, especially in Northern Europe, EE programmes are consolidated. On the other hand, in Southern Europe, EE programmes are quite novel1. In particular, Italy shows delay in comparison with European States average.

First of all, there is no national plan or strategy for EE. However, some episodic legislative interventions of the State and specific actions of the Ministry of Education could be found in the matter. Despite the fact that there is not any systematic frame of reference, the Italian State has started promoting the cultre of entrepreneurship in the educational system.

Secondly, in the State main documents, the notion of EE is borrowed from the first *Recommendation on key competences for lifelong learning*, dated 2006, and it is not always up to date to the new cultural acquisitions. In consequence of this reductive point of view, a choice of field emerges: the business aspects tend to prevail over humanistic and social ones. Indeed, according to the more recent shared vision (JRC, 2016), EE aims at (and is useful for) the development of holistic personal soft skills and attitudes, rather than specific tools for business actions; creativity, ability to catch opportunities, to be innovative and connected with the contexts wishes to create value for others in any sphere of life. So, it is intended as education also planned to promote active citizenship and social and ethic awareness, a profile that in the Italian legislation seems to be recessive.

¹ Many institutions and documents furnish comparative data. Among the more recent studies, a policy experimentation project, conducted by the Innovation Cluster for Entrepreneurship Education (ICEE), started in January 2015 and ran until January 2018. The project was assigned by the European Commission through the Erasmus+ Programme. The cluster produced a comparative analysis of eight national strategies on EE (involving Belgium/Flanders, Croatia, Denmark, Estonia, Finland, Italy, Latvia, and Norway). All good practices selected by are available online at the following URL: http://innovation-clusters.icee-eu.eu/ICEE/National-Strategies.

3. Theoretical framework

3.1 Entrepreneurial competences

Entrepreneurial competences are broadly defined as knowledge, skills and attitudes which represent the key for starting or growing a business (Mitchelmore and Rowley, 2010). Several international institutions and scholars have attempted to describe what entrepreneurial competences are, their role and contribution to the development of students' career. The Consortium for Entrepreneurship Education (2004) states that the desired competences for budding entrepreneurs are entrepreneurial skills, ready skills and business functions. In particular, entrepreneurial skills are the unique traits, behaviours and processes which differentiate an entrepreneur from an employee or manager. Then, ready skills include communication, team skills, and critical thinking/information literacy/research skills. Whereas, business functions concern the traditional business activities performed in starting and running a business, such as financial management, resource management, information management, marketing management, operations management, risk management, and strategic management.

According to the OECD (2009), entrepreneurial skills are divided into three areas: a) acquisition of basic skills concerning the level of general knowledge, communication, science, technology and problem-solving for the effective function in a working environment and the design of a professional career; b) development of personal and social skills, including teamwork, taking risks, self-esteem, self-knowledge, problem-solving, creativity and desire for innovation; and c) breathing skills which focus on the creation of companies or the financial management, such as composing business plans, marketing, sales, human resources management and designing plus drawing personal and business budgets.

On the other hand, drawing from the works of Gibb (1993) and Shook *et al.* (2003), Heinonen and Poikkijoki (2006) suggest that the entrepreneurial individual should develop a range of both skills and attributes. The category of skills includes problem-solving, creativity, persuasiveness, planning, negotiating, decision-making, while attributes are self-confidence, autonomy, achievement-orientation, versatility, dynamism and resource-fulness. Then, the work of Henry *et al.* (2005) identifies three categories of entrepreneurial skills: technical skills, business management skills, and personal entrepreneurial skills. Technical skills are written and oral communication, technical management, and organising skills. Business management skills are managerial skills such as planning, decision-making marketing and accounting. Finally, innovation, risk-taking and persistence are personal skills. Despite the current emphasis on hard entrepreneurial activities, such as patenting or the creation of academic spin-offs (Aureli, 2010;

Candelo *et al.*, 2016; Salvador, 2007; Thomas *et al.*, 2014), softer activities and soft skills also play a crucial role in EE. Passaro *et al.* (2018) and Philpott *et al.* (2011) suggest that universities should focus more on practice-oriented entrepreneurial courses and collateral activities, such as projects and training, to involve students, university staff and entrepreneurs.

Indeed, the works of Preece *et al.* (2011), Mora *et al.* (2015), and Goethner and Wyrwich (2019) emphasise that EE can be regarded as a highly integrative discipline for establishing broader interdisciplinary courses and networks. In particular, EE enables the combination of basic research, knowledge transfer, practical applications, and the interaction with the local communities.

EEPs should equip students with a broader range of marketable skills (Duval-Couetil, 2013) as well as focusing more on creative thinking. Moreover, EEPs should strengthen soft skills such as relational, conceptual, organising and commitment competences (Man *et al.*, 2002), problem recognition and problem-solving (Heinonen and Poikkijoki, 2006; Lautenschläger and Haase, 2011), negotiation, leadership, new product development and exposure to technological innovation (Kuratko, 2005).

According to Galvão *et al.* (2019), EE has the potential to encourage young people to gain organisational skills, including time management, leadership development and interpersonal skills. Besides that, EE can be a means of equipping students with the skills to identify and catch the opportunities which emerge in the knowledge environment (Hynes and Richardson, 2007), as well as creating their own jobs (Premand *et al.*, 2016). In this context, the analysis conducted by Elmuti *et al.* (2012) empirically displays that EEPs can also contribute to openness, confidence, and trust among students.

In the words of Fayolle (2013, p. 693) two major evolutions might reinforce the future of EEPs: "strong intellectual and conceptual foundations, drawing from the fields of entrepreneurship and education, to strengthen entrepreneurship courses". In addition, researchers and educators "also need to deeply reflect on practices", "taking a more critical stance toward a too often adopted 'taken for granted' position".

3.2 Entrepreneurship education: approaches and impact

The study of EE in higher education institutions is a challenging area of research for universities, governments, and industries (Kabongo and Okpara, 2010) because it encompasses a wide range of definitions, objectives, contents and pedagogical methods (Fayolle, 2008). Thus, there is no consensus on what exactly are the components of a quality practice model of higher-education entrepreneurship (Vanevenhoven and Liguori, 2013). The literature debates whether EE is the teaching of a set of skills or it represents the process of creating a mindset (Duval-Couetil, 2013).

From a general point of view, the European Commission (2006a) describes EE as a lifelong procedure which has been incorporated in higher education curricula at different levels, including undergraduate, postgraduate and Ph.D. courses. In addition, there is a growing trend in courses specifically designed for art, engineering, natural sciences and social sciences students (Duval-Couetil *et al.*; 2016; Hahn *et al.*, 2019; Kuratko, 2005).

Falkang and Alberti (2000) attempted to fit EEPs into two categories: (1) courses that explain entrepreneurship and its importance to the economy, where students remain at a distance from the subject; and (2) courses with an experiential component that train students in the skills necessary to develop their own businesses. Indeed, several articles emphasise the importance of "active", "experiential", "learning by doing" and "real-world" pedagogies (Fayolle, 2013).

In particular, Chang and Rieple (2013) state that learning to be an entrepreneur is best achieved by "learning by doing" (Politis, 2005), undergoing experiences in real-life situations (Hampden-Turner, 2002), or developed through class-based discussions of case studies or hypothetical questions. Moreover, Heinonen and Poikkijoki (2006) trace an interesting possibility in the entrepreneurial-directed approach, which involves co-learning between students and teachers. Students have ownership of their learning, while the teacher acts as a facilitator of the process, supporting them to make their own theoretical interpretations. However, Fayolle (2013) highlights that little evidence is provided regarding the adequacy between methods used and audience specificities, methods and contents, methods and institutional constraints (culture, time, space and resources). In addition, few researchers have examined to what extent differing programme models and experiential activities impact students' perceptions of their entrepreneurial knowledge, skills, and self-efficacy (Duval-Couetil *et al.*, 2016).

The extant literature on EEPs' impact shows contrasting results (Hahn *et al.*, 2019). On the one hand, the work of Almeida *et al.* (2019) suggests that students enrolled both in junior enterprises and EEPs reported a higher entrepreneurial intention than those students who are only members of a junior enterprise. Then, the findings of Duval-Couetil *et al.* (2016) report that higher perceptions of entrepreneurial knowledge are associated with the number of entrepreneurship courses taken and involvement in experiential learning activities. Moreover, the works of Sànchez (2011) and Karlsson and Moberg (2013) show a positive effect of EE on entrepreneurial skills.

On the other hand, as recognised by Lyons and Zhang (2018), several studies find weak or no effects on short-term outcomes (Fairlie *et al.*, 2015; Oosterbeek *et al.*, 2010; Von Graevenitz *et al.*, 2010). Lautenschläger and Haase (2011) even emphasise that most EEPs are "temporary fashion". The authors claim that educational systems do not promote creativity, opportunity recognition, and problem-solving skills. The analysis also suggests

to concentrate on the promotion of soft skills rather than on teaching how to start a business.

3.3 Entrepreneurship education: research gaps

The first EEP was created at the end of the 1930s in Japan. Only 40 years later, in the 1970s, EEPs started flourishing in American universities (Bell *et al.*, 2004). During the last two decades, EEPs have further expanded in most industrialised areas, including many of the European countries (Matlay and Carey, 2006; European Commission, 2012). Indeed, the number of higher institutions investing in EEPs has grown exponentially (Kuratko, 2005; O'Connor, 2013; Winkel, 2013). Furthermore, an increasing number of publications and conferences has focused on EE (Fayolle, 2013).

EEPs are established to equip students with the knowledge and skills necessary to create economic value and jobs (Duval-Couetil, 2013). In fact, European policy makers have been mainly driven by the urge to foster employability skills (Etzkowitz *et al.*, 2000), to reduce graduate unemployment (Onuma, 2016) and to support companies to solve economic underperformance (Matlay, 2006).

The literature has attempted to define the expression "entrepreneurship education". Among the several definitions, Kourilsky (1995, p. 10) states that EE represents an "opportunity recognition, the marshalling of resources in the presence of risk, and building a business venture". However, "acting entrepreneurially" does not exclusively relate to typical venture creation processes, but also to entrepreneurial behaviour in existing organisations, forms of social entrepreneurship, and even daily life situations (EC, 2004; Fretschner and Weber, 2013).

While the growing demand for entrepreneurial skills has led to a wide-spread rise in EEPs, key issues remain (Fayolle, 2013). The literature has stressed that the impact and effectiveness of EEPs are still under dispute (Donnellon *et al.*, 2014; Fretschner and Weber, 2013; Huber *et al.*, 2014). Indeed, EEPs have not been accompanied by rigorous, consistent and sustainable evaluations (Fayolle and Gailly, 2009).

Fayolle (2013) underlines the need to further investigate the appropriateness, the relevancy, the coherency, the social usefulness and the efficiency of initiatives and practices in EEPs. Furthermore, Duval-Couetil (2013) claims that the extent and nature of the outcomes of EEPs have not been well explored. In particular, few studies have analysed the short- and long-term influence of EEPs on student attitudes, behaviours, career goals, and professional competence.

According to Fayolle and Gailly (2013), and Vanevenhoven and Liguori (2013), there is little attention on how EEPs impact on students in terms of changes in attitudes, perceptions, intentions, motivations, identity and

how these outcomes translate over time into career decisions and performance. However, confusion regarding the impact of EEPs may result from the wide diversity of pedagogical methods employed (Ghulam *et al.*, 2017).

In addition, it is a matter of debate the extent to which entrepreneurship is teachable, or even worth teaching (Hynes, 1996), what should be taught and how it should be taught (Matlay, 2008; Ronstadt, 1987). Indeed, Morris and Liguori (2016, pp. XV-XVI) recently stated that "the emergence of entrepreneurship education has occurred so rapidly that it has outpaced our understanding of what should be taught by entrepreneurship educators, how it should be taught, and how outcomes should be assessed".

4. A case study

In the context of recent European policies on EE, universities are required to properly face the challenges emerging in the scientific debate. On the one hand, they are invited to improve practice-oriented entrepreneurial courses, projects and training, involving not only students, but also entrepreneurs and scholars in different disciplines (Passaro *et al.*, 2018; Philpott *et al.*, 2011). On the other hand, they should pay more attention on measuring and assessing the impact of EEPs on students' perceptions, intentions, motivations and behaviours (Fayolle and Gailly, 2013; Vanevenhoven and Liguori, 2013).

The field research presented in this section aims at contributing to fill this gap, by analysing a practice-oriented project carried out by a university in the field of SSHs which involved both students and scholars. The research discusses the effect of the participation in experiential learning activities by measuring students' perceptions of their personal, interpersonal and technical skills (Heinon and Poikkijoki, 2006; Henry *et al.*, 2005; OECD, 2009).

4.1 UniMC and IMpresa INaula

During the last years, UniMC has developed several initiatives concerning EE to support its talents and to valorise the economic and social context. UniMC enacts the claim "Humanism that Innovates": the humanistic approach can facilitate the understanding of the complexity of the current social, cultural and environmental issues, as well as generating collaborative strategies to identify business opportunities.

Among the initiatives underpinned to foster EE, UniMC joined "IMpresa INaula" in 2019. "IMpresa INaula" is a project promoted by the Regional Government of the Marche Region. The project aims to stimulate an entrepreneurial approach among students and scholars, as well to link teaching and research to industry. "IMpresa INaula" is an initiative which

was previously launched by the Region of Valencia (Spain) under the name Aula Emprende and later included in the European project – Interreg Europe iEER – Boosting innovative Entrepreneurial Ecosystem in Regions for young entrepreneurs². The Marche Region is a partner of the iEER project. More recently the iEER project has been added among the finalists of RegioStars, an award promoted by the European Commission.

"IMpresa INaula" involved the four universities of the Marche Region, namely the University of Macerata, the University of Urbino, the University of Camerino and the Marche Polytechnic University. The project was structured in two steps:

- 1) EEP for scholars. In particular, 20 scholars (5 scholars for each university) joined lectures on motivation, creativity, innovation and idea generation;
- 2) EEP for students and preparation for the final event on business idea presentation.

During the second step, UniMC scholars selected 40 students within their courses to form 5 teams that were coordinated by the personnel of the Office for the Valorisation of Research – ILO (Industrial Liaison Office) and Placement of UniMC. Scholars and students mixed their backgrounds because they belong to different departments of UniMC, namely Education, Cultural Heritage and Tourism; Political Sciences, Communication and International Relations; Human Sciences; Law; Specialisation School in Artistic and Historical Heritage. Then, the students attended an interdisciplinary course on entrepreneurship, humanism, creativity and innovation, in order to acquire and strengthen their soft skills. Students were also stimulated to transfer their academic knowledge to the business environment by means of "hands-on" group activities. Furthermore, the teams developed 5 business ideas for the valorisation of the Marche Region. The ideas mainly focused on cultural and creative sectors, including tourism, food, art and mobility.

The final event of "IMpresa INaula" took place in June 2019. UniMC teams presented their business ideas in a 3-minute English pitch in front of a panel of judges, including Rectors, Rector Delegates, scholars, entrepreneurs, professionals, innovators and representatives of the Marche Region and the Valencia Region. In addition, UniMC teams designed the business models and the prototypes of the services and products they offered. Furthermore, they created posters to describe their projects. The ideas were assessed on the capacity for innovation, social impact, market potential, business model, progress, clearness and accuracy of both presentation and information, and ability to answer the questions of the panel of judges.

² See: https://www.interregeurope.eu/ieer/.

4.2 Research methodology

To investigate the effects of "IMpresa INaula" training programme on students, we run a survey. First of all, we created a questionnaire that we administered online through the software SurveyMonkey.

The questionnaire was composed of eight already tested scales, three open-ended questions and some demographics. Specifically, scales were selected from the marketing literature (Dellande *et al.*, 2004; Hoffman *et al.*, 2010; Kim and Labroo, 2011; Sharma, 2010; Taute *et al.*, 2011; Thomson, 2006) to measure three different kinds of skills:

- 1) *personal skills*, i.e. creativity, competence, risk aversion, autonomy, goal attainment and self-esteem;
- 2) interpersonal skills, i.e. empathy;
- 3) technical skills, i.e. oral communication (Tab. 1).

Results showed acceptable reliability for all the scales used since Cronbach's Alphas score higher than .6.

Open-ended questions investigated teamwork propensity and students' perception of "IMpresa INaula" (what they have learnt from the project, what they would have learnt but did not find in the project, the level of development of technical skills and further suggestions).

Students enrolled at the University of Macerata, who had attended one of the classes coordinated by the five involved scholars during spring 2019, were invited to take the survey on a voluntarily base. We contacted 388 students and got a response rate of about 20%. In the end, the sample was composed of 75 students (mean age 24 years old); among them, 30 participated in the "IMpresa INaula" project, and 45 did not.

Tab.1: Eight tested scales composing the survey

SCALES	CRONBACH'S ALPHA
CREATIVITY (Hoffman et al., 2010)	$\alpha = 0.637$
1. I consider myself to be a creative person.	
2. Creative endeavours are important to me in my life.	
3. My best friends consider me to be a creative person.	
COMPETENCE (Thomson, 2006)	$\alpha = 0.737$
1. I feel that I can successfully complete difficult tasks and projects.	
2. I feel that I can take on and master hard challenges.	
3. I feel very capable in what I do.	
COMMUNICATION COMPETENCE (Kim and Labroo, 2011)	$\alpha = 0.804$
1. I'm good at presenting a talk to a group of people.	
2. I'm good at talking in a small group of people.	
3. I'm good at talking with a person.	
4. I'm good at talking in a large meeting of people.	

RISK AVERSION (Sharma, 2010)	$\alpha = 0.689$
1. I tend to avoid talking to strangers.	
2. I prefer a routine way of life to an unpredictable one full of change.	
3. I would not describe myself as a risk-taker.	
4. I do not like taking too many chances to avoid making a mistake.	
5. I am very cautious about how I spend my money.	
AUTONOMY (Thomson, 2006)	$\alpha = 0.723$
1. I feel that my choices are based on my true interests and values.	
2. I feel free to do things my own way.	
3. I feel that my choices express my "true" self.	
GOAL ATTAINMENT (Dellande et al., 2004)	$\alpha = 0.889$
1. I am attaining my personal goal.	
2. I think that I will achieve my goal.	
3. I am making progress towards my goal.	
4. I am not attaining my goal. (r)	
EMPHATY (Taute et al., 2011)	$\alpha = 0.710$
1. I would describe myself as a pretty soft-hearted person.	
2. Other people's misfortunes disturb me a great deal.	
3. I often have tender, concerned feelings for people less fortunate than me.	
4. When I see someone being taken advantage of, I feel kind of protective toward them.	
5. I am often quite touched by things I see happen.	
TRUST (Thomson, 2006)	$\alpha = 0.673$
1. How much can you count on yourself?	
2. How much do you trust on yourself?	
3. How dependable are you?	

Source: own elaboration

4.3 Research results

Students who participated in "IMpresa INaula" score higher evaluations in terms of creativity, competence, communication skills, autonomy and self-trust and show a lower risk aversion compared to their pairs of the same course who did not participate in "IMpresa INaula", while in terms of goal attainment and empathy, the difference between the two groups is not significant (Tab. 2).

Tab. 2: Score evaluations

Scale	Did not participate in the "IMpresa INaula" project	Did participate in the "IMpresa INaula" project		
	Mean (SD)	Mean (SD)		
CREATIVITY	3.82 _a (0.62)	4.12 _b (0.56)		
COMPETENCE	3.76 _a (0.76)	4.12 _b (0.63)		
COMMUNICATION COMPETENCE	3.72 _a (0.67)	4.06 _b (0.69)		
RISK AVERSION	3.19, (0.78)	2.83 _b (0.61)		
AUTONOMY	3.71 _a (0.78)	4.09 _b (0.57)		
GOAL ATTAINMENT	3.93 _a (0.75)	4.08, (0.66)		
EMPATHY	4.12 _a (0.49)	4.22 _a (0.55)		
TRUST	3.87 _a (0.70)	4.20 _b (0.64)		
Note: Values in the same row and subtable not sharing the same subscript are significantly different				

Note: Values in the same row and subtable not sharing the same subscript are significantly different at p<0.05 in the two-sided test of equality for column means.

Source: own elaboration

In qualitative terms, considering the answers for the open-ended questions, the propensity of working in a team seems the same between students who participated and did not participate in the project. This result is in line with the findings of the quantitative analysis, which registers similar scores for empathy as a significant component of relational skills. Almost all the students like teamworking, because it allows sharing different perspectives to develop a joint project. One student wrote: "Working in a group makes it possible to mix completely different mindsets and abilities. It can lead to exceptional results, that are unimaginable and unreachable if you work alone. I realised that the heterogeneity (of training and school/work background) of the group members is essential to have a real comparison and a variety of skills to achieve a common goal, even though it entails a greater effort to row everyone in the same direction". Among disadvantages, respondents pointed out the difficulty in negotiating and finding an agreement and the risk of opportunistic or egoistic behaviours when some members do not work or are too dominant.

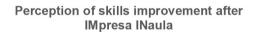
When asked to tell what they have learnt from the project, only two students did not provide an answer. The majority (23 out of 30) mentioned relational skills in their answers. Specifically, two aspects emerged: on the one hand, the possibility to share thoughts with other students, compare different perspectives, synthesise them, and work together to build and define a common project idea; on the other hand, the process entailed by teamworking. In particular, students emphasised how they have learnt to organise their different competences, divide roles, and manage time and deadlines. Two respondents explicitly mentioned how they have improved communication skills, namely public speaking, and three also focused on technical tools they have acquired (i.e. design thinking and business model canvas). Finally, one student pointed out the importance of connecting en-

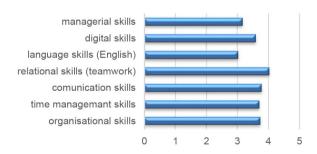
trepreneurship and humanities: "I learnt that business could be thought of even when working in the cultural heritage sector".

When asked to share what they have not found in the project, 10 out of 28 respondents did not provide any suggestion or declared themselves completely satisfied about participating in the project. Three students pointed out that the project was too short and that they needed more time, while four respondents highlighted some technical drawbacks, namely, the low support from the professor, the need of a dedicated tutor for each project and more details about the oral presentation, besides the opportunity to fix a ceiling for participants in each group. More than one-third of them (11 students) suggested more considerable attention on economic and technical aspects (e.g. administration and financial return of a project, entrepreneurship and start-ups, business model canvas, etc.). Students proposed to provide these competences not only through practice (i.e. exercise) but also by involving experts in the field and visiting enterprises.

The score students assigned to the perception of skills improvement after participating in "IMpresa INaula" confirmed these results (Fig. 1). In a scale from 1 (*not at all*) to 5 (*very much*), we got: relational skills (4.03), communication skills (3.78), organisational skills (3.75), time management (3.71), digital skills (3.6), managerial skills (3.17) and English language skills (3.03).

Fig. 1: Perception of skills improvement after "IMpresa INaula"





Source: own elaboration

In conclusion, when discussing the results of the field research, we can confirm a positive correlation between the participation in experiential learning activities and the development of soft skills of students in the field of SSHs. We can also argue that experiential learning equally contributes to the development of all the skills here investigated – i.e. personal, interpersonal and technical skills. Even though the propensity of working in a team registers no significant differences between students who participated and

did not participate in the project, students involved in "IMpresa INaula" had a positive perception of relational skills improvement after the project. Among practical recommendations for implementing entrepreneurship education in universities founded on SSHs, it is worth noting the need to improve students' business management skills such as planning, decision-making, marketing and accounting.

5. Conclusions

In line with the analysis conducted by Duval-Couetil *et al.* (2016) and Elmuti *et al.* (2012), the "Impresa INaula" training programme confirms that experiential learning activities can improve openness, confidence, and trust among students. This research advances knowledge in EE, proving the usefulness of involving both students and scholars and developing project ideas related to the aims and content of the courses students are attending. As a consequence, when focusing on practical implications, research results suggest the need to promote a closer integration of learning-by-doing activities in university curricula and programmes in SSHs. This approach allows students to get tailored entrepreneurial skills that can easily be applied to their specific field of study, thus contributing to recast entrepreneurship as a method (Sarasvathy and Venkataraman, 2011).

However, in order to equip students with a broader knowledge and competence in the field of business management, universities are also required to strengthen their relationships with the external context, inviting experts and entrepreneurs to join lectures and share their experience with students. In the case of the University of Macerata, it is important to connect entrepreneurship and humanities, by involving experts in the cultural and creative sectors. In addition, visiting enterprises could expand the students' perspective and interests. Furthermore, in line with the works of Preece et al. (2011), Mora et al. (2015), and Goethner and Wyrwich (2019), EE can be regarded as a highly integrative discipline for establishing broader interdisciplinary courses and networks. Besides involving experts and entrepreneurs to build extra academic networks, the analysis confirms that the cross-fertilisation between groups of students should be further fostered. Indeed, multidisciplinary teams facilitate the improvement of relational and organisational skills, as well as promoting creativity, opportunity recognition, and problem-solving skills. The survey could be extended to scholars who participated in the project to measure the impact of co-learning activities on university teaching. Moreover, a longitudinal analysis could evaluate the long-term effects of this kind of activities, especially their impact on students' entrepreneurial behaviour.

References

Almeida, J., Daniel, A., & Figueiredo, C. (2019). The future of management education: The role of entrepreneurship education and junior enterprises. *The International Journal of Management Education*. doi:10.1016/j.ijme.2019.100318

Aureli, S. (2010). Dalla ricerca universitaria alla creazione d'impresa: il caso EryDel SpA. *Piccola Impresa | Small Business*, 3, 119-130. doi:10.14596/pisb.59

Bell, P., Hoadley, C. M., & Linn, M. C. (2004). Design-based research in education. In M. C. Linn, E. A. Davis, & P. Bell (Eds.), *Internet environments for science education* (pp. 73-84). Mahwah: Lawrence Erlbaum.

Candelo, E., Sorrentino, M., & Cantino, V. (2016). The growth of high-tech academic spin-offs and the role of the parent organization: the case study of university of Turin. *Piccola Impresa | Small Business*, 3, 83-107. doi:10.14596/pisb.232

Carlotto, G. (2015). Soft skills. Con-vincere con le competenze trasversali e raggiungere i propri obiettivi. Milano: Franco Angeli.

Chang, J., & Rieple, A. (2013). Assessing students' entrepreneurial skills development in live projects. *Journal of Small Business and Enterprise Development*, 20(1), 225-241. doi:10.1108/14626001311298501

Council of the European Union (2015). *Council conclusions on entrepreneurship in education and training*, 2015/C 17/02. Brussels.

Council of the European Union (2018). *Council recommendations of 22 May 2018 on key competences for lifelong learning*, 2018/C 189/01, Brussels.

Dabić, M. (2019). Entrepreneurial University in the European Union—EU in the EU. *Journal of the Knowledge Economy*, 1-5. doi:10.1007/s13132-018-0579-0

Dellande, S., Gilly, M. C., & Graham, J. L. (2004). Gaining Compliance and Losing Weight: The Role of the Service Provider in Health Care Services. *Journal of Marketing*, 68, 78-91. doi:10.1509/jmkg.68.3.78.34764

Donnellon, A., Ollila, S., & Williams-Middleton, K. (2014). Constructing entrepreneurial identity in entrepreneurship education. *The International Journal of Management Education*, 12. doi: 10.1016/j.ijme.2014.05.004

Duval-Couetil, N. (2013). Assessing the impact of entrepreneurship education programs: Challenges and approaches. Journal of Small Business Management 51(3), 394-409. doi: 10.1111/jsbm.12024

Duval-Couetil, N., Shartrand, A., & Reed, T. (2016). The role of entrepreneurship program models and experiential activities on engineering student outcomes. *Advances in Engineering Education*, Winter, 1-27.

Elmuti, D., Khoury, G., & Omran, O. (2012). Does entrepreneurship education have a role in developing entrepreneurial skills and ventures' effectiveness?. *Journal of Entrepreneurship Education*, 15, 83-98. doi:10.12973/eurasia.2017.00982a

Etzkowitz, H., Webster, A., Gebhardt, C., & Cantisano, T. (2000). The future of the university and the university of the future: Evolution of ivory tower to entrepreneurial paradigm. *Research Policy*, 29(2), 313-330. doi:10.1016/S0048-7333(99)00069-4

European Commission (2003a). *Green Paper "Entrepreneurship in Europe"*. COM(2003) 27 final of 21.1.2003, Brussels: European Commission, DG Enterprise and Industry.

European Commission (2003b). *The public debate following the Green Paper "Entrepreneurship in Europe"*. Summary Report. Brussels, 19.10.2003.

European Commission (2004). Helping to Create an Entrepreneurial Culture—A Guide on Good Practices in Promoting Entrepreneurial Attitudes and Skills Through Education. Luxembourg: Office for Official Publications of the European Communities.

European Commission (2005a). Working together for growth and jobs. A new start for the Lisbon Strategy. Communication to the Spring European Council. Brussels, 2.2.2005, COM(2005) 24 final.

European Commission (2005b). *Integrated guidelines for growth and jobs* (2005-2008). Communication from the President, in agreement with vice-President Verheugen and

Commissioners Almunia and Spidla. Brussels, 12.4.2005, COM(2005) 141 final.

European Commission (2006a). *Implementing the Community Lisbon Programme: Fostering entrepreneurial mindsets through education and learning*. Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. Brussels, 13.2.2006, COM(2006)33 final.

European Commission (2006b). *The Oslo Agenda for Entrepreneurship Education in Europe*. Brussels: European Commission.

European Commission (2012). Effects and impact of entrepreneurship programmes in higher education. Brussels: European Union.

European Commission (2013). *Entrepreneurship 2020 Action Plan. Reigniting the entrepreneurial spirit in Europe*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels, 9.1.2013, COM(2012) 795 final.

European Commission (2015). Entrepreneurship Education: A road to success. A compilation of evidence on the impact of entrepreneurship education strategies and measures. Brussels: European Union.

European Commission & OECD (2012). *A Guiding framework for entrepreneurial universities*. Brussels: European Commission's DG Education and Culture and OECD LEED forum.

European Council (2000). European Charter for Small Enterprises. Brussels: European Council.

European Council (2005). Presidency Conclusions. Brussels, 22 and 23 March.

European Parliament (2015). Promoting youth entrepreneurship through education and training. European Parliament resolution of 8 September 2015 on promoting youth entrepreneurship through education and training (2015/2006(INI)), 2017/C 316/07. Brussels: European Parliament.

European Parliament & Council of the European Union (2006). *Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning*, 2006/962/EC. Brussels.

European Parliament's Committee on Culture and Education (2019). *Activity Report* 2014-2019. Brussels: European Parliament.

Fairlie, R., Karlan, D., & Zinman, J. (2015). Behind the gate experiment: Evidence on effects of and rationales for subsidized entrepreneurship training. *American Economic Journal: Economic Policy*, 7(2), 125-161. doi:10.1257/pol.20120337

Falkang, J., & Alberti, F. (2000). The assessment of entrepreneurship education. *Industry and Higher Education*, 2, 101-108. doi: 10.21100/compass.v11i2.774

Fayolle, A. (2008). Entrepreneurship education at a crossroads: Towards a more mature teaching field. *Journal of Enterprising Culture*, 16(4), 325-337. doi:0.1142/S0218495808000211

Fayolle, A. (2013). Personal views on the future of entrepreneurship education. *Entrepreneurship & Regional Development*, 25(7-8), 692-701. doi:10.1080/08985626.2013.821318

Fayolle, A., & Gailly, B. (2009). Assessing the impact of entrepreneurship education: A methodology and three experiments from French engineering schools. In G. P. West, E. J. Gatewood & K. G. Shaver. *Handbook of university-wide entrepreneurship education* (pp. 203-214). Northampton, MA: Edward Elgar.

Fayolle, A., & Gailly, B. (2013). The impact of entrepreneurship education on entrepreneurial attitudes and intention: hysteresis and persistence. *Journal of Small Business Management*, 53(1), pp. 75-93. doi: 10.1111/jsbm.12065

Fretschner, M., & Weber, S. (2013). Measuring and Understanding the Effects of Entrepreneurial Awareness Education. *Journal of Small Business Management*, 51(3), 410-428. doi: 10.1111/jsbm.12019

Galvão, A., Marques, C. S., & Ferreira, J. (2019). Evaluation of an entrepreneurship training programme: A proposal for new guidelines. *Education + Training*, 61(2), 136-152. doi:10.1108/ET-11-2018-0228

- Ghulam, N., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, 16(2), 277-299. doi: 10.5465/amle.2015.0026
- Gibb, A. A. (1993). The enterprise culture and education. understanding enterprise education and its links with small business, entrepreneurship and wider educational goals. *International Small Business Journal*, 11(3), 11-34. doi:10.1177/026624269301100301
- Goethner, M., & Wyrwich, M. (2019). Cross-faculty proximity and academic entrepreneurship: The role of business schools. *The Journal of Technology Transfer*. doi:10.1007/s10961-019-09725-0
- Hahn, D., Minola, T., Bosio, G., & Cassia, L. (2019). The impact of entrepreneurship education on university students' entrepreneurial skills: A family embeddedness perspective. *Small Business Economics*. doi:10.1007/s11187-019-00143-y

Hampden-Turner, C. (2002). *Learning in the connected economy*. Cambridge: University of Cambridge Programme for Industry, Open University.

Heinonen, J., & Poikkijoki, S-A. (2006). An entrepreneurial-directed approach to entrepreneurship education: Mission impossible? *Journal of Management Development*, 25, 80-94. doi:10.1108/02621710610637981

Henry, C., Hill, F., & Leitch, C. (2005). Entrepreneurship education and training – can entrepreneurship be taught? Part I. *Education and Training*, 47(2), 98-111. doi:10.1108/00400910510586524

Hoffman, D. L., Kopalle, P. K., & Novak, T. P. (2010). The "Right" Consumers for Better Concepts: Identifying Consumers High in Emergent Nature to Develop New Product Concepts. *Journal of Marketing Research*, 47(5), 854-865.

Huber, L., Sloof, R., & Praag, M. (2014). The effect of early entrepreneurship education: Evidence from a randomized field experiment. *European Economic Review*, 72. doi:10.2139/ssrn.2042058

Hynes, B. (1996). Entrepreneurship education and training – introducing entrepreneurship into non-business disciplines. *Journal of European Industrial Training*, 20(8), 10-17. doi:10.1108/03090599610128836

Hynes, B., & Richardson, I. (2007). Entrepreneurship education. *Education + Training*, 49(8/9), 732-744. doi:10.1108/00400910710834120

Jenner, C. (2012). Business and Education: Powerful Social Innovation Partners. *Stanford Social Innovation Review*, August 27.

JRC (2016). EntreComp: The Entrepreneurship Competence Framework. Joint Research Centre Science for Policy Report. Brussels: European Union.

Kabongo, J. D., & Okpara, J. O. (2010). Entrepreneurship education in sub-Saharan African universities. *International Journal of Entrepreneurial Behavior & Research*, 16(4), 296-308. doi:10.1108/13552551011054499

Karlsson, T., & Moberg, K. (2013). Improving perceived entrepreneurial abilities through education: exploratory testing of an entrepreneurial self-efficacy scale in a pre-post setting. *International Journal of Management Education*, 11(1), 1-11. doi:10.1016/j.ijme.2012.10.001.

Kim, S., & Labroo, A. A. (2011). From inherent value to incentive value: When and why pointless effort enhances consumer preference. *Journal of Consumer Research*, 38(4), 712-742. doi:10.1086/660806

Kourilsky, M. L. (1995). Entrepreneurship education: Opportunity in search of curriculum. Kansas City, MO: Center for Entrepreneurial Leadership, Ewing Marion Kauffman Foundation.

Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory and Practice*, 29(5), 577-598. doi:10.1111/j.1540-6520.2005.00099.x

Lautenschläger, A., & Haase, H. (2011). The myth of entrepreneurship education: Seven arguments against teaching business creation at universities. *Journal of Entrepreneurship Education*, 14, 147-161.

Lyons, E., & Zhang, L. (2018). Who does (not) benefit from entrepreneurship programs?, Strategic Management Journal, 39(1), 85-112. doi:10.1002/smj.2704

Man, T. W. Y., Lau, T., & Chan, K. F. (2002). The competitiveness of small and medium enterprises. A conceptualisation with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17(2), 123-142. doi: 10.1016/S0883-9026(00)00058-6

Matlay, H. (2006). Researching entrepreneurship and education. *Education + Training*, 48(8/9), 704-718. doi:10.1108/00400910610710119

Matlay, H. (2008). The impact of entrepreneurship education on entrepreneurial outcomes. *Journal of Small Business and Enterprise Development*, 15(2), 383-96. doi:10.5465/amle.2015.0026

Matlay, H., & Carey, C. (2006). *Entrepreneurship education in the UK: A critical perspective*. Paper presented at the ISBE Conference, Cardiff, November.

Mitchelmore, S., & Rowley, J. (2010). Entrepreneurial competencies: A literature review and development agenda. *International Journal of Entrepreneurial Behavior & Research*, 16(2), 92-111. doi:10.1108/13552551011026995

Mora, J.-G., Ferreira, C., Vidal, J., & Vieira, M.-J. (2015). Higher education in Albania: Developing third mission activities. *Tertiary Education and Management*, 21(1), 29-40. doi:10. 1080/13583883.2014.994556

Morris, M. H., & Liguori, E. (2016). *Preface: Teaching reason and the unreasonable. Annals of entrepreneurship education and pedagogy.* Northampton, MA: Edward Elgar.

O'Connor, A. (2013). A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes. *Journal of Business Venturing*, 28, 546-563. doi:10.1016/j.jbusvent.2012.07.003

OECD (2009). *Evaluation of programmes concerning education for entrepreneurship*. Report by the OECD Working Party on SMEs and Entrepreneurship, OECD.

Oosterbeek, H., Van Praag, M., & Ijsselstein, A. (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54, 442-454. doi:10.1016/j.euroecorev.2009.08.002

Onuma, N. (2016). Entrepreneurship education in Nigerian tertiary institutions: A remedy to graduates unemployment". *British Journal of Education*, 4(5), 16-28.

Passaro, R., Quinto, I., & Thomas, A. (2018). The impact of higher education on entrepreneurial intention and human capital. *Journal of Intellectual Capital*, 19(1), 135-156. doi:10.1108/JIC-04-2017-0056

Philpott, K., Dooley, L., Oreilly, C., & Lupton, G. (2011). The entrepreneurial university: Examining the underlying academic tensions. *Technovation*, 31(4), 161-170.

Politis, D. (2005). The process of entrepreneurial learning: A conceptual framework. *Entrepreneurship Theory and Practice*, 29(4), 399-424. doi:10.1111/j.1540-6520.2005.00091.x

Preece, J., Croome, D., Ntene, M., & Ngozwana, N. (2011). Nurturing lifelong learning in communities through the National University of Lesotho: Prospects and challenges. *International Journal of Lifelong Education*, 30(6), 713-732.

Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (2016). Entrepreneurship education and entry into self-employment among university graduates. *World Development*, 77, 311-327. doi:10.1016/j.worlddev.2015.08.028

Ronstadt, R. (1987). The educated entrepreneurs: A new era of entrepreneurial education is beginning. *American Journal of Small Business*, 11(4), 37-53. doi:10.1177/104225878501000102

Salvador, E. (2007). Il finanziamento delle imprese spin-off della ricerca italiana. *Piccola Impresa | Small Business*, 1, 75-107. doi:10.14596/pisb.122

Sánchez, J. C. (2011). University training for entrepreneurial competencies: its impact on intention of venture creation. *International Entrepreneurship and Management Journal*, 7(2), 239-254. doi:10.1007/s11365-010-0156-x

Sarasvathy, S. D., & Venkataraman, S. (2011). Entrepreneurship as Method: Open Questions for an Entrepreneurial Future. *Entrepreneurship Theory and Practice*, 35(1), 113-135. doi.org/10.1111/j.1540-6520.2010.00425.x

Sharma, P. (2010). Measuring personal cultural orientations: Scale development and validation. *Journal of the Academy of Marketing Science*, 38(6), 787-806. doi: 10.1007/s11747-009-0184-7

Shook, C. L., Priem, R. L., & McGee, J. E. (2003). Venture creation and the enterprising individual: A review and synthesis. *Journal of Management*, 23(3), 379-99. doi:10.1016/S0149-2063(03)00016-3

Taute, H. A., Mcquitty, S., & Sautter, E. P. (2011). Emotional Information Management and Responses to Emotional Appeals. *Journal of Advertising*, 40(3), 31-43. doi:10.2307/23048692

Thomas, A., Passaro, R., & Scandurra, G. (2014). La creazione d'impresa di origine accademica. Uno studio sull'intenzione imprenditoriale. *Piccola Impresa | Small Business*, 2, 77-97. doi: doi: 10.14596/pisb.150

Thomson, M. (2006). Human Brands: Investigating Antecedents to Consumers' Strong Attachments to Celebrities. *Journal of Marketing*, 70(3), 104-119. doi:10.1509/jmkg.70.3.104

Vanevenhoven, J., & Liguori, E. (2013). The impact of entrepreneurship education: Introducing the Entrepreneurship Education Project. *Journal of Small Business Management*, 51(3), 315-328. doi: 10.1111/jsbm.12026

Von Graevenitz, G., Harhoff, D., & Weber, R. (2010). The effects of entrepreneurship education. *Journal of Economic Behavior & Organization*, 76(1), 90-112. doi:10.1016/j. jebo.2010.02.015

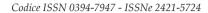
Winkel, D. (2013). The changing face of entrepreneurship education. *Journal of Small Business Management*, 51(3), 313-314. doi: 10.1111/jsbm.12027





Rivista Piccola Impresa/Small Business

n. 1, anno 2021





THE ADEQUATE ORGANIZATIONAL, ADMINISTRATIVE AND ACCOUNTING STRUCTURE IN SMES: BURDEN AND HONOR

L'adeguato assetto organizzativo, amministrativo e contabile nelle pmi: onere e onore

Carla Morrone University of Naples Parthenope carlamorrone@hotmail.it

Article info

Date of receipt: 02/08/2020 Acceptance date: 07/01/2021

Keywords: Internal control system, Governance, PMI

doi: 10.14596/pisb.2848

Abstract

Legislative Decree no. 14 of 12th January 2019, in addition to replacing the bankruptcy law and establishing the new Code of Business Crisis and Insolvency, introduced and amended some articles of the Italian Civil Code on the management and control of business activities. Indeed, the regulatory provision, which requires the appointment of a control body or auditor for small and medium-sized enterprises, also affects the management of the performing companies and, in particular, the establishment by these entities of an internal control system. The analysis carried out is intended to highlight the benefits that small and medium-sized enterprises could obtain implementing a valid and adequate organizational, administrative and accounting structure

1. Introduzione

La riforma introdotta dal d.lgs. n. 14 del 12 gennaio 2019 rinvenibile nel nuovo Codice della crisi di impresa e dell'insolvenza è volta anche a favorire la precoce emersione dello stato di crisi e, auspicabilmente, la sua corretta gestione. A tal fine il legislatore ha esplicitato nel comma 2 dell'art. 2086 c.c. che "l'imprenditore, che operi in forma societaria o collettiva, ha il dovere di istituire un assetto organizzativo, amministrativo e contabile adeguato alla natura e alle dimensioni dell'impresa, anche in funzione della rilevazione tempestiva della crisi dell'impresa" e ampliato i casi in cui le società sono obbligate a nominare il collegio sindacale o il revisore legale. In particolare, l'articolo 2 bis della L. 55/2019 prevede che la nomina dell'organo di controllo o del revisore è obbligatoria se la società:

"a) è tenuta alla redazione del bilancio consolidato; b) controlla una società obbligata alla revisione legale dei conti; c) ha superato per due esercizi consecutivi almeno uno dei seguenti limiti: 1) totale dell'attivo dello stato patrimoniale: 4 milioni di euro; 2) ricavi delle vendite e delle prestazioni: 4 milioni di euro; 3) dipendenti occupati in media durante l'esercizio: 20 unità;

L'obbligo di nomina dell'organo di controllo o del revisore di cui alla lettera c) del secondo comma cessa quando, per tre esercizi consecutivi, non è superato alcuno dei predetti limiti".

Tale nomina dovrà avvenire entro la data di approvazione del bilancio relativo all'esercizio 2021 in virtù delle modifiche apportate all'art. 379 del Codice della crisi d'impresa e dell'insolvenza a seguito della conversione del Decreto Rilancio.

Oltre agli obblighi di segnalazione, l'organo di controllo è investito dei tradizionali compiti tra cui la vigilanza sul rispetto dei principi della corretta amministrazione e sull'adeguatezza dell'assetto organizzativo, amministrativo e contabile adottato dalla società nonché sul suo concreto funzionamento (Bianca, 2019); in altre parole deve accertare l'esistenza e il buon funzionamento del cosiddetto Sistema di Controllo Interno (SCI) (Anderson, 1977; Roth, 1998).

Obiettivo di questo articolo è analizzare il sistema di controllo che le aziende di minori dimensioni dovrebbero implementare per essere *compliant* alle nuove disposizioni normative, sottolineando i benefici che le stesse potrebbero trarne. Il riferimento alle aziende di minori dimensioni proposto nel presente lavoro non coincide necessariamente con la definizione di piccola e media impresa (PMI) ai sensi dell'articolo 2 dell'allegato della raccomandazione 2003/361/CE¹ ma assume un'accezione ampia e

¹La Commissione Europea (2020) distingue a sua volta le PMI in microimprese, piccole imprese e medie imprese. Le prime occupano meno di 10 unità lavorative e realizzano un fatturato annuo o un totale di bilancio annuo non superiore a 2 milioni di euro, le seconde occupano meno di 50

non strettamente quantitativa come quella sovente proposta in letteratura (Ciambotti, 1984). Infatti, come già suggerito da Allini et al. (2018), le imprese di minori dimensioni possono essere identificate anche mediante il ricorso a parametri qualitativi (Storey, 2000). In questo senso, caratteristiche tipiche di tali imprese sono, a titolo esemplificativo, la frequente coincidenza del soggetto economico col management aziendale e quindi il forte coinvolgimento della proprietà nella definizione dello stile direzionale, la limitata disponibilità di risorse umane alle quali non sempre è possibile offrire attraenti percorsi di crescita e il difficile accesso al mercato dei capitali e al credito con conseguente scarsità di risorse finanziarie per il cui ottenimento è talvolta richiesto il coinvolgimento personale dell'imprenditore.

Se negli anni passati il tema del SCI era di interesse sostanzialmente esclusivo delle società quotate o comunque di grandi dimensioni, con l'entrata in vigore delle disposizioni del d.lgs. 14/2019, buona parte del tessuto imprenditoriale italiano, come noto caratterizzato da PMI, è obbligatoriamente interessato all'argomento dovendosi adeguare alle previsioni legislative.

Il presente articolo è strutturato come segue. Nel paragrafo 2 si propone una revisione della letteratura circa il SCI, una ricognizione delle prassi operative e un'analisi del quadro normativo e si esplicita il significato di adeguato assetto organizzativo, amministrativo e contabile. Ciò permette di descrivere le caratteristiche imprescindibili del SCI nelle PMI ed evidenziare come la conformità alle novità introdotte dalla riforma si ripercuota anche sull'attività strategica, direzionale e operativa. Nel paragrafo 3, pur riconoscendo le difficoltà riscontrabili nel brevissimo termine, si sottolineano i potenziali benefici in un'ottica di più lungo periodo. Infine, nel paragrafo 4 si illustrano le principali riflessioni conclusive.

2. Il sistema di controllo interno: letteratura, prassi operative e quadro normativo

2.1 Il sistema di controllo interno

Il sistema di controllo interno è stato oggetto di plurimi studi di economia aziendale (tra gli altri, Bertini, 2004; D'Onza, 2008; Marchi et al., 2008; Garzella et al., 2009; Lamboglia, 2011; Coller et al., 2012; Marchi, 2012; Trucco, 2014). Negli ultimi decenni sia l'accademia sia i *practitioner* hanno proposto molteplici definizioni (Coda, 1998; Comoli, 2002; Zanda, 2002;

persone e registrano un fatturato o un totale di bilancio annuo inferiore o uguale a 10 milioni di euro, le terze occupano meno di 250 risorse e presentano un fatturato annuo non superiore a 50 milioni di euro o un totale di bilancio annuo non superiore a 43 milioni di euro.

PwC, 2004; Bowrin, 2004; COSO, 2016; CNDCEC, 2012) e sviluppato diversi modelli di controllo interno anche in virtù dell'evoluzione tecnologica che incide significativamente sulle modalità di costruzione di validi SCI (Yang e Guan, 2004; Azzali e Mazza, 2011). In letteratura, il concetto stesso di controllo ha visto nel corso degli anni una significativa trasformazione, passando dalla mera verifica e ispezione all'attuale accezione, più ampia, di controllo-guida (Bergamin Barbato, 1991; D'Onza, 2008; Greco et al., 2019). Difatti si è passati dal controllo (sostanzialmente contabile) inteso come attività tesa a evitare prima, e a individuare poi, comportamenti errati, a un controllo volto al raggiungimento degli obiettivi aziendali dove il controllore non è più solo un "ispettore" ma anche, appunto, una guida. Pavan e D'Onza (2013) scrivono "i manager si aspettano di ricevere dai controlli interni informazioni utili e tempestive sia per individuare le attività a basso valore aggiunto da eliminare, ridisegnare o riprogettare, sia per identificare i processi che possono presentare delle potenzialità inespresse da valorizzare".

Il suddetto ampliamento di significato, tra l'altro, fa sì che oggi si parli di sistema di controllo poiché quest'ultimo è la risultante di un complesso di elementi che si integrano vicendevolmente. Il SCI, infatti, include tanto il controllo amministrativo-contabile e di compliance quanto il controllo strategico e operativo (Ferraris Franceschi, 2007).

Coda (1998) afferma che "un efficace Sistema di Controllo Interno è la risposta razionale al problema di come amministratori e direttori possono far fronte alle loro pesanti responsabilità in materia di trasparenza informativa, correttezza gestionale, efficacia ed efficienza".

D'Onza (2008), riprendendo Bertini (1990), sottolinea come il controllo, unitamente alla pianificazione dell'attività aziendale e alla sua organizzazione, permette il buon funzionamento dell'azienda e il raggiungimento del suo fine istituzionale, mettendo in luce l'importanza che il controllo interno riveste nella gestione dei driver della creazione del valore. L'autore definisce il controllo interno come "l'attività di verifica e di guida degli andamenti gestionali che si sviluppa nell'ambito del perimetro aziendale". Interessante in merito alla relazione tra sistema di controllo e gestione aziendale è anche l'analisi di Miraglia (2012) che sottolinea il rapporto di reciprocità esistente: "la strategia si determina all'interno di una relazione dinamica che include anche il sistema di controllo".

Con riferimento alla prassi, Borsa Italiana (2020) definisce il SCI come l'insieme "delle regole, procedure e strutture organizzative finalizzate ad una effettiva ed efficace identificazione, misurazione, gestione e monitoraggio dei principali rischi, al fine di contribuire al successo sostenibile della società".

È dunque evidente come la cultura del rischio e la cultura del controllo rappresentino due facce della stessa medaglia (Gandini, 2004; D'Onza, 2008; AIIA, 2016) tant'è che si parla spesso di sistema di controllo interno e di gestione dei rischi. Il sistema di controllo interno, infatti, rientra nel

più ampio concetto di governance che comprende anche l'enterprise risk management (ERM) e la gestione delle performance (COSO, 2016). Proprio in virtù del fatto che una governance consapevole si concentra tanto sulla gestione dei rischi quanto sul processo di controllo, occorre rilevare come la centralità del tema sia stata ulteriormente rafforzata dall'emergenza Covid-19 che ha evidenziato la necessità per tutte le organizzazioni (non solo quelle del mondo finanziario e bancario) di integrare la gestione dei rischi con la pianificazione strategica, nell'ormai piena consapevolezza che esiste un importante collegamento tra rischio, strategia e performance aziendali (Coller et al., 2012; Bure e Tengeh, 2019; Greco e D'Onza, 2020).

Il Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2016) definisce il controllo interno come un processo – posto in essere dagli organi apicali, dal management e da altro personale – volto a fornire una ragionevole certezza in ordine al raggiungimento degli obiettivi aziendali. In particolare, il COSO distingue quattro categorie di obiettivi: obiettivi strategici, obiettivi operativi, obiettivi di reporting, obiettivi di compliance.

Pur riconoscendo l'impossibilità di suggerire una soluzione valida per tutte le aziende, il COSO enuncia alcuni principi generali che le organizzazioni – tenendo in considerazione le proprie caratteristiche (es. modello organizzativo, cultura aziendale, strumenti finanziari disponibili, settore di appartenenza) – dovrebbero considerare per implementare una efficace governance. A titolo esemplificativo:

- supervisione dei rischi da parte degli organi apicali;
- definizione della governance e del modello operativo;
- identificazione dei comportamenti organizzativi desiderati che caratterizzano i valori e gli atteggiamenti fondamentali dell'impresa verso il rischio;
- impegno per l'integrità e l'etica;
- definizione chiara delle responsabilità e delle linee guida nella gestione dei rischi;
- attrazione, sviluppo e *retention* dei talenti.

Pavan (2019) sintetizza sostenendo che le componenti utili al raggiungimento degli obiettivi sopra enunciati sono: l'ambiente di controllo, l'informazione, la comunicazione, la valutazione del rischio, l'attività di controllo e il monitoraggio.

Con riferimento all'attività di controllo, in aggiunta a quanto posto in essere dagli organi di corporate governance (Salvioni, 2009), le *best practice* prevedono che un completo SCI sia articolato su tre livelli (cd. *three lines of defence*) (IIA, 2013) a cui sono associati diversi strumenti e responsabilità:

• il primo è rappresentato dai controlli di linea effettuati dal management nell'ambito dell'ordinaria gestione dei processi aziendali. È su questi controlli, *in primis*, che si basa il buon funzionamento dell'intero sistema;

- il secondo è rappresentato dai controlli effettuati da apposite funzioni di staff (es. compliance, *risk management*, controllo di gestione);
- il terzo è rappresentato dai controlli effettuati dalla Funzione di Internal Audit (IA) che fornisce l'assurance sull'adeguatezza del disegno, sulla efficace ed efficiente funzionalità e sull'effettiva affidabilità del SCI. L'attività dell'IA è svolta principalmente sulla base di un piano di audit definito di solito annualmente in un'ottica risk based.

Le disposizioni normative che, ante d.lgs. 14/2019, in qualche modo contemplano il SCI sono contenute nel d.lgs. 231/2001 e nella L. 262/2005.

Il primo introduce e disciplina la responsabilità penale degli enti per i reati (cd. reati presupposto) commessi da amministratori, dipendenti e soggetti sottoposti alla direzione o vigilanza delle società, nell'interesse o a vantaggio degli stessi, prevedendo quale clausola esimente l'adozione ed efficace attuazione del Modello di Organizzazione, Gestione e Controllo (cd. Modello 231) e la nomina dell'Organismo di Vigilanza (Valensise, 2009). Il decreto, è bene precisarlo, consiglia ma non impone la redazione del Modello e la nomina del suddetto organismo.

La seconda, recante disposizioni per la tutela del risparmio e la disciplina dei mercati finanziari, interessa esclusivamente le società quotate sul mercato italiano e prevede taluni adempimenti che impattano sul controllo interno (Cortesi et al., 2009); la legge in parola, per esempio, prevede la nomina del dirigente preposto alla redazione dei documenti contabili societari il quale deve predisporre adeguate procedure amministrative e contabili per la formazione del bilancio d'esercizio e di ogni altra comunicazione economica e finanziaria.

Questo breve excursus sul quadro regolamentare del sistema di controllo interno evidenzia come l'argomento sia nella pratica "ad oggi" di interesse dominante delle società quotate.

2.2 Il sistema di controllo interno nelle PMI

Nonostante la prassi abbia finora affrontato il tema con interesse prevalente² verso le aziende di grandi dimensioni, la Dottrina già da anni ha iniziato a studiare l'argomento con particolare riferimento alle PMI (tra gli altri Marchini, 1998; Arcari, 2004; Borrajo et al., 2005; Mazzoleni, 2008; Caldarelli e Marchi, 2018) riscontrando, tra l'altro, una frequente mancanza della cultura organizzativa orientata al controllo (Riccaboni, 2004).

² Nel 2014 l'associazione italiana degli amministratori non esecutivi e indipendenti (Nedcommunity) ha pubblicato un documento dal titolo "Principi di Corporate Governance delle PMI non quotate" proprio al fine di "diffondere la cultura della buona governance e di favorire la diffusione e lo sviluppo di sistemi avanzati (efficaci ed efficienti) di direzione e controllo" (Olivieri, 2019).

Tale attività di ricerca è dovuta alla convinzione che controllare permetta di comprendere, in qualsivoglia organizzazione, l'effettivo operato aziendale, dando ordine e indirizzo alla gestione (Mancini, 2018).

Sebbene, come osservano Allini et al. (2018), l'estensione del sistema di controllo aumenti al crescere dell'azienda, la sua consistenza non sempre può essere direttamente proporzionale alla mera dimensione, dovendo invece correlarsi alla complessità dell'organizzazione e ai rischi che questa fronteggia. Tuttavia, è appena il caso di rappresentare che neanche il profilo di rischio aziendale è direttamente proporzionale alla dimensione e, in quanto elemento chiave, andrebbe opportunamente indagato *ex ante* nella definizione del modello di business e monitorato *ongoing* mediante l'implementazione di adeguati strumenti di management control (Anthony, 1975; Mitchell e Reid, 2000; Armitage et al., 2016; Chiucchi et al., 2012).

Cattaneo e Bassani (2015) hanno indagato la presenza dei sistemi di controllo formali nelle PMI familiari osservando che la stessa si nota, oltre al crescere della dimensione, in situazione di crisi, in contesti con bassi livelli di fiducia, laddove manca una figura chiave nella gestione e nel controllo e laddove la governance non condivide i medesimi valori.

Diversi contributi sottolineano come la carenza di risorse manageriali interne faccia sì che l'apporto tecnico e specialistico nelle PMI sia sovente affidato a consulenti esterni, spesso dottori commercialisti, che assumono un ruolo centrale nella definizione e implementazione della strategia di creazione del valore (Camagni, 2008; Nandan, 2010) che si cela, tra l'altro, dietro validi sistemi di pianificazione e controllo (Anthony; 1975; Aloi e Aloi, 2005). In merito all'apporto consulenziale, è utile puntualizzare la centralità che queste figure dovrebbero ricoprire – in ottica prospettica –, non solo con l'obiettivo di rispettare quanto previsto dalla norma, ma anche di favorire lo sviluppo di competenze interne indispensabili per il raggiungimento dell'equilibrio economico a valere nel tempo.

2.3 Alcune novità introdotte dal d.lgs. n. 14 del 12 gennaio 2019

Una delle novità introdotte dal nuovo Codice della crisi di impresa e dell'insolvenza è rappresentata dalla previsione degli strumenti di allerta che favoriscano la tempestiva emersione dello stato di crisi (cd. early warning) al fine di evitare che detto status diventi cronico o, nel caso di crisi irreversibile, di salvaguardare il patrimonio aziendale. A tale scopo, la norma pone da un lato in capo all'organo gestorio il dovere di predisporre assetti adeguati alla precoce rilevazione degli indizi di crisi o di insolvenza e dall'altro in capo all'organo di controllo, al revisore esterno o alla società di revisione, il dovere "di verificare che l'organo amministrativo valuti costantemente, assumendo le conseguenti idonee iniziative, se l'assetto organizzativo dell'impresa è adeguato, se sussiste l'equilibrio economico finanziario e quale è il

prevedibile andamento della gestione, nonché di segnalare immediatamente allo stesso organo amministrativo l'esistenza di fondati indizi della crisi. La segnalazione [...] deve contenere la fissazione di un congruo termine [...] entro il quale l'organo amministrativo deve riferire in ordine alle soluzioni individuate e alle iniziative intraprese. In caso di omessa o inadeguata risposta [...] i soggetti di cui al comma 1 informano senza indugio l'OCRI (Organismi della crisi d'impresa), fornendo ogni elemento utile per le relative determinazioni, anche in deroga al disposto dell'articolo 2407 c.c., primo comma, del codice civile quanto all'obbligo di segretezza". Il terzo comma dell'art. 14 del d.lgs. 14/2019 precisa che la tempestiva segnalazione all'organo amministrativo costituisce causa di esonero dalla responsabilità solidale per le conseguenze pregiudizievoli delle omissioni o azioni successivamente poste in essere dal predetto organo e non può costituire giusta causa di revoca dall'incarico.

In sintesi, la riforma prevede due nuove tipologie di obblighi: quelli di segnalazione a carico di sindaci/revisori e quelli organizzativi a carico del soggetto economico.

Dopo aver accennato agli obblighi dell'organo di controllo sanciti dal d.lgs. 14/2019, è opportuno ricordare che ai nuovi doveri si aggiungono i compiti del collegio sindacale ai sensi del codice civile che integrano le responsabilità sopra descritte.

L'art. 2403 c.c. disciplina i doveri del collegio sindacale la cui attività di vigilanza e controllo non deve limitarsi alla verifica del rispetto delle leggi da parte dell'organo amministrativo ma, a tutela di tutti gli stakeholder, deve estendersi a tutta l'attività sociale (Baudino e Frascinelli, 2008). Il collegio sindacale è tenuto "ad un controllo di legalità non puramente formale ma esteso al contenuto sostanziale dell'attività sociale e dell'azione degli amministratori allo scopo di verificare che le scelte discrezionali non travalichino i limiti della buona amministrazione" (Cassazione, n. 13081/2013).

Accademici, professionisti e associazioni di categoria molto hanno detto e scritto in merito agli effetti che la riforma avrà sulle piccole e medie imprese italiane in tema di crisi (Baldissera, 2019; Bogarelli, 2020) e sulle nuove e "pericolose" responsabilità in capo ai loro sindaci e revisori. A titolo esemplificativo, il presidente della Piccola Industria di Confindustria – prima dell'emergenza Covid-19 – ha stimato che circa 25/30 mila imprese in fase di prima applicazione sarebbero coinvolte nelle procedure di allerta (Il Sole 24 Ore, 2019).

Meno dibattuto è il tema delle nuove regole di governance e della reale possibilità di implementazione di adeguati sistemi di controllo interno in queste piccole realtà (Sacco, 2019); la disposizione legislativa, si badi bene, non è circoscritta alla mera modifica degli statuti e alla nomina dell'organo di controllo o del revisore ma permea, se pienamente rispettata, la gestione ordinaria dell'azienda *in bonis* in maniera sostanziale (Cavaliere, 2019).

Ciò premesso, il legislatore ha introdotto, come si è detto, all'art. 2086 c.c. il dovere per gli imprenditori che operano in forma societaria o collettiva di istituire un assetto organizzativo, amministrativo e contabile adeguato alla natura e alle dimensioni dell'impresa.

Cosa si intende con assetto organizzativo?

Nelle Norme di comportamento del collegio sindacale si legge «per assetto organizzativo si intende il complesso delle direttive e delle procedure stabilite per garantire che il potere decisionale sia assegnato ed effettivamente esercitato a un appropriato livello di competenza e responsabilità».

Quando l'assetto organizzativo è adeguato?

Questo può dirsi adeguato se:

- è conforme alle dimensioni e alla complessità della società;
- è dotato di un organigramma che identifichi in maniera chiara le funzioni aziendali, i compiti e le linee di responsabilità;
- l'attività decisionale e direttiva è svolta dai soggetti ai quali sono attribuiti i relativi poteri;
- esiste un sistema procedurale che preveda una formalizzata ed effettiva segregazione dei ruoli e delle responsabilità costantemente aggiornato e diffuso;
- le persone coinvolte nei processi sono dotate delle competenze richieste in virtù delle responsabilità assegnate.

Cosa si intende con assetto amministrativo e contabile?

Nelle Norme di comportamento del collegio sindacale questo è definito come «l'insieme delle direttive, delle procedure e delle prassi operative dirette a garantire la completezza, la correttezza e la tempestività di un'informativa societaria attendibile, in accordo con i principi contabili adottati dall'impresa».

Quando l'assetto amministrativo e contabile è adeguato?

Questo può dirsi adeguato se:

- è dotato di un sistema contabile gestito da personale appositamente formato;
- i fatti di gestione sono opportunamente e tempestivamente tradotti in dati contabili completi, attendibili e verificabili *ex post*;
- è capace di evitare l'errata rilevazione dei fatti di gestione o, comunque, di rilevare eventuali anomalie;
- assicura la produzione di informazioni e dati validi e utili per le scelte gestionali.

Più genericamente, l'adeguatezza dell'assetto organizzativo, amministrativo e contabile deve essere valutata tenendo conto del criterio di proporzionalità; infatti, dovrebbero influire sul disegno del sistema di governance e quindi sul sistema di controllo interno e di gestione dei rischi sia la dimensione e la natura dell'organizzazione sia la complessità dell'attività svolta (Boffelli, 2019). Allini et al. (2018) sottolineano l'importanza di implementare un sistema di controllo appropriato alla dimensione e alle caratteristiche aziendali, evidenziando il rischio che diversamente lo stesso possa essere "rigettato".

L'assetto organizzativo, amministrativo e contabile nonché lo specifico sistema di monitoraggio volto alla precoce identificazione di un potenziale stato di crisi sembrerebbero proprio i pilastri di un sistema di controllo interno (Amatucci, 2016); questo per funzionare correttamente deve essere tale da garantire, in sintesi, almeno una formalizzata segregazione dei ruoli e delle responsabilità, la coerenza tra responsabilità e poteri, la tracciabilità e verificabilità a posteriori delle operazioni, una valida attività di pianificazione basata sulla produzione di solidi dati prospettici nonché il monitoraggio continuo del raggiungimento dei risultati attesi attraverso, per esempio, l'analisi degli scostamenti. In altre parole, ai sensi dell'art. 2086 c.c., le società dovrebbero dotarsi almeno di un organigramma (Ruggiero, 2010), di procedure e processi per la corretta gestione (Ceroli et al., 2020) e di un adeguato sistema contabile oltre a implementare strumenti di gestione forward looking capaci di diagnosticare il rischio di default nel breve e medio termine (Superti Furga e Sottoriva, 2020). Con riferimento a quest'ultimo punto si precisa che sebbene il CNDCEC abbia elaborato gli indici di cui al secondo comma dell'art. 13 del d.lgs. 14/2019, non esiste un modello di valutazione del rischio di crisi aziendale preconfezionato e adatto a tutte le realtà imprenditoriali e pertanto ciascuna società deve provvedere a identificare il modello più confacente alla propria organizzazione.

3. Il sistema di controllo interno nelle PMI: da onere a onore

Il tessuto imprenditoriale coinvolto dalla riforma è sostanzialmente rappresentato dalle società a responsabilità limitata (s.r.l.). Dai dati pubblicati dall'ISTAT³ emerge che su un totale di 885.707 s.r.l. attive in Italia nel 2017, ben l'85% hanno un numero di addetti compreso tra 0 e 9; circa il 14% presenta un numero di addetti compreso tra 10 e 49 e poco più dell'1% delle s.r.l. occupa oltre 50 unità di personale.

Dall'"indagine modelli organizzativi 231 e anticorruzione" di Confindustria e TIM dell'aprile 2017 emerge che tutte le imprese con meno di 10 dipendenti sono prive del Modello 231.

In questo contesto è evidente che l'implementazione del SCI generi spese rappresentate, al minimo, dai costi *una tantum* per l'aggiornamento dello statuto e dalle parcelle per l'attività di controllo. Al minimo perché bisogna rilevare che sebbene il legislatore preveda l'istituzione di "un assetto organizzativo, amministrativo e contabile adeguato alla natura e alle dimensioni dell'impresa", alcuni requisiti non possono prescindere da una struttura minima, sia in termini di risorse umane sia di sistemi informativi, della quale almeno alcune PMI non sono dotate. Ciò, se da un lato rende di fatto

³http://dati.istat.it/Index.aspx?DataSetCode=DICA_ASIAUE1P#

inapplicabile il soddisfacimento sostanziale e non solo formale della previsione normativa nel brevissimo periodo, potrebbe essere l'occasione per un ripensamento degli assetti delle PMI che potrebbe creare benefici all'intero mercato grazie a una migliore strutturazione delle singole entità, a un incremento della loro dimensione media e a un rafforzamento della capitalizzazione necessario in un'ottica prospettica e di *risk management*.

L'implementazione di un sistema di controllo interno, generando benefici finanziari e operativi, contribuisce alla sopravvivenza stessa dell'impresa (Pavan e D'Onza, 2013). Taluni autori ritengono addirittura che in assenza di una efficace gestione dei rischi e di un ben progettato sistema di controlli, le aziende siano destinate a "fallire" (Ferri et al., 2018; Gachoka et al., 2018). Come evidenziato da Ferri et al. (2018), il risk management è essenziale per le PMI che, disponendo di risorse limitate, potrebbero – in assenza di un'adeguata gestione dei rischi – non avere le capacità di rispondere tempestivamente alle minacce esterne, compromettendo in maniera irreversibile la loro sopravvivenza. Anche Allini et al. (2018) osservano come l'assenza di adeguati sistemi di controllo costituisca uno dei fattori che incide sulla capacità di raggiungere l'obiettivo aziendale. Per completezza, tuttavia, è opportuno rappresentare che alcuni contributi evidenziano come le aziende di minori dimensioni, ancorché spesso non dotate di formalizzati sistemi di controllo, riescano comunque a conseguire risultati eccellenti grazie alla capacità di cogliere tempestivamente le opportunità e all'attitudine all'innovazione nonché all'abilità nel fronteggiare, in virtù della flessibilità che le contraddistingue, le sfide proposte dal mercato (Cerved, 2016; Allini et al., 2018).

Indipendentemente dai diversi approcci presenti in letteratura, l'importanza di un adeguato sistema di controllo e di gestione dei rischi sembrerebbe aver tristemente trovato riscontro in occasione dell'emergenza Covid-19 le cui conseguenze economiche, in Italia, hanno avuto luogo in un contesto caratterizzato da PMI che, presentando una cronica sottocapitalizzazione (Di Rodolfo, 2004) e una modesta capacità gestionale, non sempre sono state in grado di resistere alla congiuntura.

Vantaggi significativi dell'implementazione di SCI derivano anche dalla prevenzione o comunque dalla tempestiva identificazione di eventuali frodi (D'Onza et al., 2018).

Introdurre un SCI potrebbe anche generare una maggiore responsabilizzazione del management permettendo di migliorare l'efficienza operativa e le prestazioni grazie sia a un quotidiano monitoraggio della gestione e all'analisi di opportuni indicatori di performance sia a una promozione della cultura del rischio.

Infine, il SCI incide sull'affidabilità dell'informativa contabile sia verso l'esterno che verso l'interno. La comunicazione aziendale, infatti, è destinata al soddisfacimento degli interessi di tutti gli interlocutori aziendali

(Amaduzzi, 1949; Di Stefano, 1990; Bertinetti, 1996; Allegrini, 2003) e la capacità di comunicare in modo corretto e affidabile (Beretta e Bozzolan, 2008) può incidere sulle condizioni di economicità dell'impresa contribuendo alla conquista e al mantenimento di un adeguato livello di fiducia da parte degli stakeholder (Bertini, 1995; Bartoli, 2006; Beretta et al., 2011). Si pensi alla possibile riduzione del rischio percepito dal mercato che potrebbe comportare, a titolo esemplificativo, un minor costo del capitale (Desmond, 2000) e un miglioramento del capitale relazionale (Tayles et al., 2007).

4. Conclusioni

Il sistema di controllo interno e di gestione dei rischi rappresenta un essenziale elemento della governance che non può e non deve costituire un mero obiettivo di compliance.

Alla luce di quanto evidenziato, sebbene l'implementazione di un adeguato SCI necessiti di tempo e investimenti potrebbe innescare processi virtuosi a beneficio sia della singola impresa sia dell'intero mercato in considerazione della più efficace e consapevole gestione dei rischi, della maggiore efficienza organizzativa e della più affidabile formazione dei dati economici e finanziari che impattano positivamente sul rapporto con tutti gli stakeholder.

Va sottolineata, in particolare, l'attenzione che le società dovrebbero avere nella scelta dei soggetti da coinvolgere nella governance affinché l'implementazione porti i benefici sperati (Del Baldo et al., 2019). Infatti, preso atto del requisito normativo, i soggetti economici dovrebbero, in primo luogo, implementare internamente un sistema di controllo fatto di attori, processi e strutture in grado di accogliere e sviluppare una gestione simultanea delle dimensioni di rischio e di performance a livello strategico, direzionale e operativo e, in secondo luogo, evitare di eleggere un organo di controllo costituito da "figure deboli", poco incisive e non sufficientemente autorevoli. Al contrario, i soggetti economici dovrebbero cogliere l'occasione per designare persone capaci, in grado di apportare nuovo capitale intellettuale (Aschauer et al., 2015) e il cui coinvolgimento favorisca, anche a fronte di taluni sacrifici economici di breve periodo, il reale sviluppo di un sistema di controllo e non solo la conformità alle previsioni legislative. In tale senso, il professionista esterno potrebbe suggerire tecniche, approcci e metodologie di controllo nuove, innescando processi virtuosi e in grado di migliorare il SCI e accrescere la dimensione del capitale economico. In altre parole, essere sostanzialmente e non solo formalmente conformi alla norma, permetterebbe alle aziende di minori dimensioni di migliorare il processo di creazione del valore. Infatti, l'integrazione di un valido ambiente di controllo, di un'attenta comunicazione intra aziendale, di un costante processo di risk assessment nonché di un'attività di controllo e monitoraggio consentono – ove necessario – di adottare tempestive e idonee misure correttive.

Raggiunte dette conclusioni, ulteriori approfondimenti potrebbero essere utili per rispondere a un'altra domanda di ricerca: "come fare per costruire e implementare un adeguato SCI nelle PMI?" Pur riconoscendo il potenziale intrinseco del sistema di controllo interno, è necessario prevederne un inserimento graduale e personalizzato in considerazione delle dimensioni e delle caratteristiche aziendali.

Bibliografia

Allegrini, M. (2003). L'informativa di periodo nella comunicazione economico finanziaria. Principi e contenuti. Milano, Giuffrè.

Allini, A., Caldarelli, A., Fiondella, C., Spanò, R., & Zampella, A. (2018). Il management accounting fra teoria e prassi. Le esigenze emergenti. In Caldarelli, A. & Marchi, L. (eds), Il sistema di controllo interno nelle imprese non grandi. Elementi costitutivi, dimensioni soggettive e tendenze di integrazione (15-44). Milano, FrancoAngeli.

Aloi, F., & Aloi, A. (2005). Il budget e il controllo di gestione per le PMI. Milano, IPSOA.

Amaduzzi, A. (1949). Conflitto ed equilibrio di interessi nel bilancio dell'impresa. Bari, Francesco Cacucci.

Amatucci, C. (2016). Adeguatezza degli assetti, responsabilità degli Amministratori e Business judgement Rule. *Giurisprudenza Commerciale*, *5*, 643-670.

Anderson, R. J., (1977). The external Audit I: Concepts and Techniques. Toronto, Cropp Clark Pitman.

Anthony, R. N. (1975). Sistemi di pianificazione e controllo. Schema di analisi. Milano, Etas. Arcari, A. M. (2004). PMI. Meccanismi di controllo e gestione della crescita. Milano, EGEA.

Armitage, H. M., Webb, A., & Glynn, J. (2016). The use of management accounting techniques by small and medium-sized enterprises: a field study of Canadian and Australian Practice. *Accounting perspectives*, 15(1), 31-69. doi: 10.1111/1911-3838.12089

Aschauer, E., Moro, A., & Massaro, M. (2015). The auditor as a change agent for SMEs: the role of confidence, trust and identification. *Review of Managerial Science*, 9(2), 339-360.

AIIA (2016). Convegna nazionale AIIA 2016 "La cultura del rischio e la cultura del controllo: due facce della stessa medaglia" (cfr. https://www.aiiaweb.it/convegnonazionale-aiia-2016).

Azzali, S., & Mazza, T. (2011). La valutazione degli Information Technology Controls nell'ambito dei sistemi di controllo interno: i risultati di una ricerca empirica. *Management Control*, 3, 91-118.

Baldissera, A. (2019). Le piccole imprese italiane e le procedure di allerta della crisi. *Piccola Impresa | Small Business*, 2.

Bartoli, F. (2006). Tecniche e strumenti per l'analisi economico-finanziaria. Piani, programmi, modelli e indicatori economico-finanziari alla luce di Basilea 2. Milano, FrancoAngeli.

Baudino, A., & Frascinelli, R. (2008). Il bilancio ed i controlli nelle s.p.a. e nelle s.r.l. dopo la Finanziaria 2008. Rimini, Maggioli.

Beretta, S., & Bozzolan, S. (2008). Quality versus quantity: The case of forward-looking disclosure. *Journal of Accounting, Auditing & Finance*, 23, 333-375. doi: 10.1177/0148558X0802300304

Beretta, S., Bozzolan, S., & Michelon, G. (2011). La disclosure sul sistema di controllo interno come meccanismo di monitoraggio: evidenze empiriche da differenti contesti istituzionali. *Management Control*, 1, 125-149. doi: 10.3280/MACO2011-001006

Bergamin Barbato, M. (1991). Programmazione e controllo in un'ottica strategica. Torino, UTET. Bertinetti, G. (1996). *Comunicazione finanziaria aziendale e teoria della finanza*. Milano, Egea. Bertini, U. (1990). *Il sistema d'azienda*. Torino, Giappichelli.

Bertini, U. (1995). *Scritti di politica aziendale*. Torino, Giappichelli.

Bertini, U. (2004). Dissesti aziendali e sistemi di controllo interni. *Studi e note di economia*, 2, 7-13.

Bianca, M. (2019). I nuovi doveri dell'organo di controllo tra Codice della crisi e Codice civile. *Diritto fallimentare e delle società commerciali*, 94, 1339-1353.

Boffelli, D. (2019). Orientamenti sulla Corporate Governance dell'Autorità Bancaria Europea (ABE) in Governance e controlli interni nelle società non quotate alla luce del codice della crisi di impresa, Quaderni SAF, n. 80.

Bogarelli, P. (2020). Punctual crisis assessment in SMEs: an applicative model. *Piccola Impresa | Small Business*, 2.

Borrajo, M. L., Corchado, J. M., Yáñez, J.C., Fdez-Riverola, F., & Díaz, F. (2005). Autonomous internal control system for small to medium firms. Articolo presentato a 6th International Conference on Case-Based Reasoning, Chicago, 23-26 Agosto 2005 (pp. 106-121).

Borsa Italiana (2020). Codice di corporate governance (https://www.borsaitaliana.it/comitato-corporate-governance/codice/2020.pdf consultato l'8 novembre 2020).

Bowrin, Â. R. (2004). Internal control in Trinidad and Tobago religious organizations. *Accounting, Auditing & Accountability Journal*, 17(1), 121-152.

Bure, M., & Tengeh, R. K. (2019). Implementation of internal controls and the sustainability of SMEs in Harare in Zimbabwe. *Entrepreneurship and Sustainability Issues, VsI Entrepreneurship and Sustainability Center*, 7(1), 201-218.

Caldarelli, A. & Marchi, L. (2018). Il sistema di controllo interno nelle imprese non grandi. Elementi costitutivi, dimensioni soggettive e tendenze di integrazione. Milano, FrancoAngeli.

Camagni, A. (2008). Le nuove competenze necessarie al Dottore Commercialista in Il dottore commercialista e la pianificazione e il controllo nella PMI. *I quaderni della Scuola di Alta Formazione*, 20, 7-17.

Cattaneo, C. & Bassani, G. (2015). Sistemi di controllo formali nelle pmi familiari: una presenza possibile?. *Rivista Piccola Impresa/Small Business*, 1, 31-52.

Cavaliere, T. M. (2019). Codice della crisi d'impresa e dell'insolvenza. Le modificazioni del codice civile. *Giurisprudenza Italiana*, 8/9, 2046-2056.

Ceroli, P., Menghi, A., & Borroni, G. (2020). *Indicatori di allerta standard e personalizzati*. Milano, Il Sole 24 Ore.

Cerved (2016). Rapporto Cerved PMI 2016.

Chiucchi, M. S., Gatti, M., & Marasca, S. (2012). The relationship between management accounting systems and ERP systems in a medium-sized firm: a bidirectional perspective. *Management Control*, 3, 39-65. doi: 10.3280/MACO2013-SU3003

Ciambotti, M. (1984). La misurazione della dimensione e il problema definitorio della piccola impresa. *Rivista dei Dottori Commercialisti*, 1.

CNDCEC (2012). Norme di comportamento del collegio sindacale.

Coda, V. (1998). Responsabilità degli amministratori e direttori, sistema di controllo interno e internal auditing, Atti del Convegno ISVI-AIIA, I meccanismi di integrità aziendale: verso una nuova concezione di Internal Auditing, Milano, EGEA.

Coller, G., Collini, P., & Frigotto, M. L. (2012). Strategia e design del sistema di controllo. *Management Control*, 2, 15-41.

Commissione Europea (2020). Guida dell'utente alla definizione di PMI.

Comoli, M. (2002). I sistemi di controllo interno nella corporate governance. Milano, Egea.

Cortesi, A., Tettamanza, P., & Corno, F. (2009). Empirical evidence on internal control systems and corporate governance in Italy. *Journal of Management and Governance*, 13(1-2), 75-100.

COSO (2016). Enterprise Risk Management Integrated Framework – Executive Summary Framework.

D'Onza, G., (2008). Il sistema di controllo interno nella prospettiva del risk management. Milano, Giuffrè Editore.

D'Onza, G., Rakipi, R., la Rosa, F., Bernini, F., De Santis, F., Greco, G., Cenciarelli, V. G., & Martino, P. (2018). I controlli sull'informativa aziendale. In Caldarelli, A. & Marchi, L. (eds), Il sistema di controllo interno nelle imprese non grandi. Elementi costitutivi, dimensioni soggettive e tendenze di integrazione (113-167). Milano, FrancoAngeli.

Del Baldo, M., Arcari, A. M., & Ruisi, M. (2019). Controllo di gestione nelle PMI e consulenti esterni. *Management Control, Suppl.* 1, 69-94.

Desmond, P. (2000). Reputation Builds Success-Tomorrow's Annual Report. *Corporate Communications: An International Journal*, 5(3), 168-73.

Di Rodolfo, P. (2004). Piccole e medie imprese: sinergie tra le riforme. Rivista di Diritto Bancario e Finanziario.

Di Stefano, G. (1990). Il sistema delle comunicazioni economico-finanziarie nella realtà aziendale moderna. Milano, Giuffrè.

Ferraris Franceschi, R. (2007). Pianificazione e Controllo. Torino, Giappichelli.

Ferri, L., Ginesti, G., Maffei, M., Zagaria, C., & Zampella, A. (2018). *Il management accounting nelle medie imprese. Logiche da integrare*. In Caldarelli, A. & Marchi, L. (eds), Il sistema di controllo interno nelle imprese non grandi. Elementi costitutivi, dimensioni soggettive e tendenze di integrazione (45-75). Milano, FrancoAngeli.

Gachoka, N., Aduda, J., Kaijage, E., & Okiro, K. (2018). The Moderating Effect of Organizational Characteristics on the Relationship between Budgeting Process and Performance of Churches in Kenya. *Journal of Finance and Investment Analysis*, 7(2), 1-5.

Gandini, G. (2004). Internal auditing e gestione dei rischi nel governo aziendale. Milano, FrancoAngeli.

Garzella, S., Mancini, D., & Moschera, L. (2009). Sistemi di controllo interno e soluzioni organizzative. Torino, Giappichelli.

Greco, G., & D'Onza, G. (2020). Dal controllo alla creazione del valore. *Management control*, 2, 5-9.

Greco, G., Presti, C., & Marchi, L. (2019). Il sistema di controllo interno: evoluzione e prospettive. In Greco, G., & Marchi, L. (eds), Nuove prospettive su governance, audit, risk e performance management (1-17). Torino, Giappichelli.

IIA (2013). IIA position paper: the three lines of defense in effective risk management and control (https://na.theiia.org/standards-guidance/Public%20Documents/PP%20The%20 Three%20Lines%20of%20Defense%20in%20Effective%20Risk%20Management%20 and%20Control.pdf consultato l'8 giugno 2020).

Il Sole 24 Ore (2019). Crisi d'impresa, Robiglio: «Allerta» per 25-30mila aziende. Timori per plastic tax e Ilva (https://www.ilsole24ore.com/art/crisi-d-impresa-robiglio-allerta-25-30-mila-aziende-timori-plastic-tax-e-crisi-ilva-ACN5wux consultato il 22 aprile 2020).

Lamboglia, R. (2011). Un'analisi della letteratura sulla valutazione del sistema di controllo interno: stato dell'arte e prospettive future. *Management Control*, 2, 105-132.

Mancini, D. (2018). Evoluzione e prospettive dei sistemi di informazione e controllo. *Management Control*, 2, 5-14. doi: 10.3280/MACO2018-SU2001

Marchi, L., Paolini, A., & Castellano, N. (2008). Principi contabili internazionali e sistemi di controllo interno. Milano, Franco Angeli.

Marchi, L. (2012). Revisione aziendale e sistemi di controllo interno. Milano, Giuffrè.

Marchini, I. (1998). Il governo della piccola impresa vol. III - La gestione delle funzioni. Urbino, Genova, ASPI:INS-EDIT.

Mazzoleni, A. (2008). Controllo di gestione e performance aziendali nelle PMI. Analisi del contesto bresciano. Milano, FrancoAngeli.

Miraglia, R. A. (2012). Nuove tendenze nei sistemi di controllo e di misurazione delle performance. *Management Control*, 2, 6-14. doi: 10.3280/MACO2012-002001

Mitchell, F., & Reid, G. C. (2000). Problems, challenges and opportunities: the small business as a setting for management accounting research. *Management Accounting Research*, 11(4), 385-390. doi: 10.1006/mare.2000.0152

Nandan, R. K. (2010). Management accounting needs of SMEs and the role of professional accountants: a renewed research agenda. *Journal of Applied Management Accounting Research*, 8(1), 67-79.

Olivieri, R. (2019). Principi di Corporate Governance delle PMI per società non quotate in *Governance e controlli interni nelle società non quotate alla luce del codice della crisi di impresa*. Quaderni SAF, n. 80.

Pavan, A. (2019). Controllo interno e di gestione nella prospettiva del valore. *Management Control*, 1 – Special Issue, 5-12. doi: 10.3280/MACO2019- SU1001

Pavan, A. & D'Onza, G. (2013). Innovare i sistemi di controllo e di governance per gestire il cambiamento. *Management Control*, 2, 5-7. doi: 10.3280/MACO2013-002001

PricewaterhouseCoopers (2004). Il sistema di controllo interno: un modello integrato per la gestione dei rischi aziendali. Progetto Corporate Governance per l'Italia. Milano, Il Sole 24 Ore.

Riccaboni, A. (2004). Il cambiamento nei sistemi di controllo: la dimensione «immateriale». *Controllo di gestione*, 1(1), 19-25.

Roth, S. J., (1998). Beyond Coso. Internal control to enhance corporate governance. New York, Wiley.

Ruggiero, C. (2010). Disegnare l'organizzazione. Come si progetta e realizza un organigramma. Rimini, Maggioli.

Sacco, B. (2019). Il nuovo Codice della crisi d'impresa e dell'insolvenza e gli alert di bilancio: un'opportunità per le PMI?. *Quaderni di ricerca sull'artigianato*, 2, 181-202.

Salvioni, D. M. (2009). *Corporate governance, controllo e trasparenza*. Milano, Franco Angeli. Storey, D. J. (2000). *Understanding the small business sector*. Thomson Learning.

Superti Furga, F., & Sottoriva, C. (2020). Riflessioni sul Codice della crisi e dell'insolvenza. *Le Società*, 1, 7-13.

Tayles, M., Pike, R. H. & Sofian, S. (2007). Intellectual capital, management accounting practices and corporate performance: perceptions of managers. *Accounting, Auditing & Accountability Journal*, 20(4), 522-548.

Trucco, S. (2014). Linee evolutive del sistema di controllo interno a supporto della comunicazione finanziaria. *Economia Aziendale Online - Business and Management Science International Quarterly Review*, 4, 215-227.

Valensise, P. (2009). L'organismo di vigilanza ex d.lgs. n. 231/01: considerazioni su poteri, composizione e responsabilità. *Analisi Giuridica dell'Economia*, 2, 355-382.

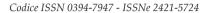
Yang, D., & Guan, L. (2004). The evolution of IT auditing and internal control standards in financial statement audits: The case of the United States. *Managerial Auditing Journal*, 19(4), 544-555. doi: 10.1108/02686900410530547

Zanda, G. (2002). Sistemi di controllo interno e Internal Auditing. Problemi di struttura e di funzionamento. *Rivista Italiana di Ragioneria e di Economia Aziendale*, 102(1-2), 84-103.



Rivista Piccola Impresa/Small Business

n. 1, anno 2021





PASSION BETWEEN CONSUMPTION AND ENTREPRENEURSHIP: AN EXPLORATORY ANALYSIS OF COMIC PUBLISHERS' CASE STUDIES

La passione tra consumo e imprenditorialita': un'analisi esplorativa da casi-studio di editori di fumetti

Giada Salvietti University of Parma giada.salvietti@unipr.it Silvia Ranfagni University of Firenze silvia.ranfagni@unifi.it

Article info

Date of receipt: 16/02/2020 Acceptance date: 02/03/2021

Keywords: Comic publishers; Passion and entrepreneurship; Case study

doi: 10.14596/pisb.2829

Abstract

This article aims to intervene in the academic debate on entrepreneurial passion, with respect to the innovative and dynamic forms that have been configured as linking forces between entrepreneurship and consumption. Starting from recent contributions, which defined the concept of "connecting passion" and identified its main components, this work aims to further deepen its knowledge and dynamics by exploring a market characterized by a strong artistic and cultural feature. The authors propose a case study analysis involving companies operating in the Italian comic books publishing market. Through the discussion of empirical results, it will be shown that creativity is crucial and intertwined to passion in allowing entrepreneurs to manage their business venture while expressing themselves and consequently remaining both artists and consumers as well.

1. Introduzione

Negli ultimi decenni, la letteratura di indirizzo manageriale ha posto una crescente attenzione al sentimento universalmente noto come "passione" e già ampiamente rappresentato e celebrato dalle discipline umanistiche. Gli studiosi di impresa recuperano così le considerazioni filosofiche e psicologiche che individuano nella passione una forza intensa, coinvolgente, motivazionale e più in generale influente sul comportamento dell'individuo, per verificarne l'impatto sui consumatori e sugli imprenditori (Cardon & Kirk, 2015; Baraldi et al., 2020).

Nei mercati post-moderni, questi riescono a sviluppare una passione per un determinato oggetto che costituisce, per i primi, il centro del desiderio e dell'atto di consumo, e, per i secondi, il principale indirizzo e *core business* aziendale. Consumatori e imprenditori tendono dunque a vivere la passione al di fuori del proprio ambito strettamente personale-individuale, e a farne la *raison d'étre* del proprio quotidiano.

Per lungo tempo, la letteratura ha indagato separatamente il vissuto dei consumatori e degli imprenditori. Dei primi, si è analizzata la propensione a formare un legame duraturo ed affettivo con il prodotto, in cui si esprime l'identità dell'acquirente appassionato; questo processo è supportato dalla condivisione della propria passione e del suo oggetto con altri consumatori, che vanno a costituire aggregazioni sociali incentrate sul prodotto/servizio (c.d. comunità e tribù) (Belk & Costa, 1998; Cova, Pace e Park, 2007). Lo studio della passione rispetto all'imprenditorialità ha invece evidenziato quanto le performance aziendali ne possano essere positivamente influenzate: la passione, infatti, agisce da impulso motivazionale per il superamento delle criticità che possono manifestarsi nello svolgimento dell'attività imprenditoriale.

Più recentemente, la letteratura internazionale di management si è dedicata all'analisi di forme emergenti di imprenditorialità, che si intendono come emanazione diretta di una passione nata da consumatore. L'implicazione è quella di una maturazione professionale dell'individuo, che nasce da una conoscenza di prodotto profonda e distintiva, dovuta all'alternativa dedizione al proprio hobby. Tra i framework proposti in letteratura, si è scelto, nel presente lavoro, di adottare il concetto di *connecting passion* proposto in Ranfagni e Runfola (2018). Secondo questa visione, la passione può essere concepita come un ponte tra le identità di consumatore e imprenditore che convivono nello stesso soggetto, facendogli vivere il business come un gioco. Tale dimensione permette all'individuo appassionato di mitigare la tensione generata dall'impegno imprenditoriale e dalle sue criticità, nonché di continuare a rapportarsi con il prodotto esprimendosi in esso come un consumatore. Questo concetto presuppone inoltre l'esistenza di una comunità di consumo in cui entrambe le identità di consumatore

e di imprenditore possano realizzarsi, proponendo una chiave di lettura dinamica e trasversale rispetto alle altre esperienze di *domain-related entrepreneurship* (Cardon, Glauser e Murnieks, 2017) proposte in letteratura.

Il presente lavoro è volto ad indagare le dinamiche della passione quale costrutto connettivo in un contesto commerciale e culturale, quale il mercato editoriale italiano del fumetto, in cui gli imprenditori che animano le piccole e medie case editrici sono, oltre che consumatori appassionati, anche artisti professionisti. Oltre ad una revisione puntuale della letteratura sul tema della passione nel consumo e nell'imprenditorialità, il paper propone l'analisi di tre casi di studio individuati in questo mercato, i risultati empirici raccolti mediante interviste condotte sul campo, nonché la discussione dei fattori costituenti la *connecting passion* in un contesto dalla forte impronta culturale ed artistica.

2. Review della letteratura: la passione quale concetto interdisciplinare

La principale complessità nello studio della passione risiede nella sua stessa definizione: per quanto sia un concetto ricorrente nel quotidiano, inquadrarlo nella sua essenza e nelle sue diverse sfaccettature ha coinvolto, per secoli, discipline diverse. Individuiamo i filosofi quali primi – e a lungo unici - teorici della passione, che ricondurranno all'interno delle più ampie tematiche di etica, morale e religione. Il ricco contributo dei grandi filosofi (quali Kant, 1798; Rousseau, 1781; Nietzsche, 1883) ci lascia l'idea di "passione" come di forza intensa e fortemente condizionante dei comportamenti e dei sentimenti umani, spesso contrapposta alla ragione ed alla razionalità, e dalla doppia natura emozionale di piacere e di sofferenza, che genera tensione nell'individuo. Nella psicologia, invece, la passione viene concepita come un'emozione duratura, la cui origine è ricondotta sia all'interiorità dell'individuo sia al contesto sociale e relazione nel quale questi vive (Ribot, 1907). Negli anni, inoltre, viene adottato un approccio concreto, giungendo a considerare a tutti gli effetti anche attività quotidiane, prodotti e brand come possibili oggetti della passione, parte della vita e dell'identità di un individuo che è anche consumatore (Pradines, 1958; Frijda, 1986).

Fondamentale per la nostra analisi, così come per molti altri studi condotti in ambito economico, è il lavoro dello psicologo Robert J. Vallerand (2015), a cui si devono due importanti contributi allo studio della passione:

1. Una definizione di passione¹ omnicomprensiva, che tiene conto della sua multidimensionalità, e al tempo stesso adottabile da più discipline;

¹ "Passion can be seen as a strong inclination toward a specific object, activity concept or person that one loves (or at least strongly likes), highly values, invests time and energy in on a regular basis, and that is part of one's identity" - Vallerand, R. J. (2015). The psychology of passion: A dualistic model, Oxford University Press, pag. 33.

2. Lo sviluppo di strumenti analitici operativi e scientifici – *Dualistic Model of Passion e Passion Scale* – che consentano di schematizzare le passioni, individuarne le determinanti, misurarne l'intensità e determinarne gli effetti più probabili.

É proprio l'ampio spettro di applicazione di questi strumenti e modelli a portare al consolidamento di molte teorie e fonti sviluppatesi in tema di passione del consumatore e, ancora più recentemente, di passione imprenditoriale. Il *Dualistic Model of Passion*, infatti, ha permesso di affermare che la passione contribuisce in maniera determinante alla costruzione dell'identità dell'individuo, sia a livello personale che interpersonale (Vallerand, 2015); identità che, in un contesto post-moderno, si esprime e concretizza attraverso i processi di consumo.

2.1 L'influenza della passione sulla costruzione dell'identità dell'individuo-consumatore

La comprensione delle relazioni dirette e trasversali che il consumatore instaura con il bene che acquista – e che costituirà una delle basi del marketing relazionale – passa necessariamente attraverso il contributo dell'antropologo Russell Belk, e che possiamo sintetizzare nella definizione di Sé esteso, o "extended self" (1988, p. 150). Il consumatore si auto-definisce prendendo a riferimento oggetti e beni che acquista e possiede, che diventano espressione del suo Sé, nonché le persone, i luoghi, i gruppi sociali, a cui sente di appartenere tramite tale atto di possesso (Belk, 1988). La passione, in questo processo, agisce come driver, manifestandosi sotto forma del desiderio che spinge il consumatore all'acquisto del bene ed incarnando i benefici cui questi aspira, oggettivi e relazionali (Belk, Ger e Askegaard, 2003).

Il consumatore si soddisfa sia acquistando il bene divenuto oggetto della passione ed utilizzandolo in maniera convenzionale che condividendo la propria esperienza di consumo insieme ad altri individui utilizzatoriappassionati. Se già con Bourdieu (1979) gli oggetti diventano un modo per riconoscersi a livello sociale o per imitare e raggiungere gruppi sociali più elevati, oggi la socializzazione è mediata tramite l'inclusione degli altri nell'intero processo di consumo di un oggetto o di un'attività che diventano il fulcro di una passione individuale. Fenomeno, questo, tanto maggiore nelle esperienze di consumo ricreative, ludiche e sportive, in cui anche il coinvolgimento degli altri partecipanti è spesso intenso ed attivo (Celsi, Rose e Leigh, 1993; Arnould e Price, 1993).

All'interno di questi contesti sociali, l'individuo-consumatore può vivere la propria passione in maniera collettiva e, allo stesso tempo, forma e trasforma la propria identità beneficiando del contributo dei soggetti terzi che sono coinvolti nel processo, influenzati e influenzatori. La relazione stessa del singolo individuo-consumatore con il bene-oggetto della pro-

pria passione coincide con una sua rielaborazione e reinterpretazione in chiave innovativa e comunitaria, arricchendolo di nuovi significati, valori e contesti. In primo luogo, possiamo rilevare l'evoluzione delle "fantasie contemporanee di consumo" (Belk e Costa, 1998; Cohen e Taylor, 1992), che coinvolgono i consumatori appassionati nel vivere insieme un'esperienza distintiva riprodotta all'interno della comunità e sostenuta anche dalla condivisione di una stessa cultura o sub-cultura di consumo che gli stessi ritengono rilevante rispetto alle proprie identità estese (Belk e Costa, 1998; Ramalho Da Silva e Barboza Andreoni, 2013).

In secondo luogo, l'ampliamento degli orizzonti sociali del consumatore dato dall'emergere delle ICT ha consentito agli stessi appassionati di creare contesti sociali ancora più strutturati ed articolati, culturalmente omogenei – comunità e tribù (Cova e Cova, 2002; Cova, Pace e Park, 2007) – all'interno dei quali si sviluppano conoscenze e competenze distintive e che diventano contestualmente centri di dialogo con le aziende e i brand che costituiscono l'offerta (Carù e Cova, 2011; Pencarelli et al, 2019).

I consumatori appassionati diventano dunque sempre più importanti per le aziende: sono fedeli ma esigenti, esprimono esplicitamente le proprie richieste e i propri giudizi, riuscendo spesso a prevedere nuove tendenze, problematiche ed opportunità del prodotto o del mercato (Fournier e Lee, 2009; Fuggetta, 2012).

2.2 La passione come driver del business e delle performance d'impresa

I primi studi in tema di passione imprenditoriale hanno spinto la letteratura a considerare questo ambito separatamente rispetto alla passione del consumatore derivante dall'uso del prodotto. Da un lato, si manifesta l'interesse a cogliere una relazione di causa-effetto tra la passione ed il conseguimento di obiettivi aziendali di crescita, attraverso il maggiore impegno dell'imprenditore; dall'altro, c'è la volontà di indagare se effettivamente la passione possa influire anche sull'emergere di imprenditorialità, e dunque sulla nascita di nuove ventures, contestualmente alle caratteristiche personali del soggetto-imprenditore (Bolton e Thompson, 2003; Thompson, 2004).

Secondo il primo framework teorico proposto da Cardon et al (2009), la passione è un elemento imprescindibile del progetto imprenditoriale, essendo integrata in almeno un particolare aspetto dell'attività di business. Gli autori parlano infatti di "Entrepreneurial passion" come di "a consciously accessible, intense positive feelings toward entrepreneurial tasks and activities, associated with roles that are meaningful and noticeable to one's self-identity" (2009, p. 547). L'imprenditore è più portato a diffondere le proprie energie nella task aziendale che più lo appassiona e soddisfa e nella quale si riconosce a livello identitario; da ciò derivano stili e comportamenti imprenditoria-

li differenti. In particolare, si evidenzia un elevato engagement dell'imprenditore nelle attività di ricerca e sviluppo (inventing), di investimento e lancio di nuovi business (founding), di management e crescita aziendale (developing). L'area d'impresa verso la quale l'imprenditore ha una forte inclinazione, e che ne costituisce l'oggetto della passione, potrà beneficiare in misura maggiore della sua attenzione, nonché dello sviluppo di capacità quali la risoluzione creativa dei problemi, la persistenza di fronte a rischi ed ostacoli, e l'assorbimento (Breugst, Domurath, Patzelt e Klaukien, 2012; Cardon e Kirk, 2015). La direzione più innovativa intrapresa dalla letteratura è ad oggi quella di considerare nuove forme di imprenditorialità nelle quali la passione del fondatore è rivolta al prodotto/servizio che produce e fornisce, o all'ambito/settore nel quale opera. La *venture* aziendale viene così a costituire un mezzo per perseguire una passione per uno specifico prodotto/servizio, o per risolvere problemi relativi ad un determinato ambito: si parla pertanto di product passion o domain passion (Cardon, Glauser, Murnieks, 2017), nonché di hobby-related entrepreneurship (Milanesi, 2018).

Il tratto più rilevante di queste passioni *object-related* è che, nello svolgimento del proprio business, l'imprenditore riesce a perseguire e portare avanti un profondo interesse che ha avuto origine nel proprio vissuto di consumatore. Non di rado, infatti, i consumatori, spinti dalla propria passione, vengono coinvolti nella generazione di innovazioni grazie al proprio modo di "vivere" il bene, che li porta a sviluppare soluzioni distintive alle problematiche che si presentano, a reinventare sue funzioni accessorie, o ad inventare nuovi prodotti complementari o sostitutivi (Von Hippel, 2005; Bogers, Afuah e Bastian, 2010). Questi stessi soggetti innovatori sono inoltre spinti a diffondere il proprio contributo: laddove alcuni lo fanno in modo libero e gratuito, letteralmente per passione, altri collaborano attivamente con aziende produttrici strutturate o diventano essi stessi imprenditori (c.d. user-entrepreneurship) (Von Hippel, 2005). La figura dello user-entrepreneur, successivamente sviluppata in numerosi contributi di rilievo (Shah e Tripsas, 2007; Haefliger et al, 2010), è strettamente legata all'esistenza di una forte comunità di consumo che l'imprenditore abita in primo luogo in qualità di consumatore. Il processo di sviluppo della stessa innovazione deriva dal costante confronto con gli altri consumatori, che finiscono per rappresentare anche il bacino di utenza dei nuovi prodotti o servizi. Similmente, anche il tribal entrepreneur (Cova e Guercini, 2016) si rivolge direttamente ad un segmento di consumatori appassionati ancora più circoscritto e intimamente coinvolto nei confronti del prodotto. L'imprenditore appassionato, condividendo la propria passione per il prodotto con la comunità, riesce a produrre un'innovazione nella quale riesce a riconoscersi in prima persona, riconnettendosi con la propria identità di consumatore: ciò rappresenta anche il punto di forza e la principale distintività della sua venture imprenditoriale.

2.3 Connecting passion e nuove direttrici di indagine

Lo sviluppo di un'idea innovativa da parte dei consumatori appassionati è, tuttavia, solo il primo passo di un processo impegnativo e proiettato nel futuro. Sebbene lo user-entrepreneur sia pienamente in grado di comprendere la portata commerciale della propria proposta e possa contare sulle competenze personali che ha maturato in quanto consumatore appassionato e membro attivo della comunità, la transizione verso l'imprenditorialità non è priva di sfide. Egli dovrà infatti acquisire nuove abilità sia tecniche che relazionali, apprendendo sul campo come comportarsi, come porsi di fronte al mercato, come competere con gli altri attori, finendo con l'assumere un ruolo in tutto e per tutto professionale (Pinelli et al., 2018). Una problematica specifica che viene individuata anche nella letteratura internazionale riguarda la sopravvivenza dell'impresa nel lungo periodo. Essendo la passione e l'identità due costrutti psicologici mutevoli nel tempo ed influenzati dalle condizioni esterne all'individuo, è lecito domandarsi come e se gli imprenditori appassionati riescano a mantenere entrambi i ruoli nel lungo periodo e in che modo possano eventualmente gestire i conflitti derivanti da questo dualismo e che impattano in maniera diretta sul business.

Possono, ad esempio, emergere obiettivi contrastanti per l'individuo-consumatore e l'individuo-consumatore: già Thorgren, Nordström e Wincent (2014) evidenziano come negli imprenditori part-time (*hybrid entrepreneur*) vi sia costante conflitto nella ripartizione del tempo da dedicare alle diverse attività nonché alla vita privata. É necessario pertanto chiedersi se la passione continua ad essere una forza sufficientemente motivante o se contribuisce all'emergere del conflitto (Nordström, Sirén, Thorgren, & Wincent, 2016; Jahanmir e Lages, 2016).

Il modello basato sul concetto di *connecting passion* (Ranfagni e Runfola, 2018), adottato all'interno del presente lavoro, identifica i connotati di una passione in grado di mitigare le pressioni imprenditoriali e di permettere all'individuo di continuare ad essere, in una certa misura, un consumatore interessato e coinvolto.

Secondo questo modello, la commistione tra impresa e identità del consumatore-imprenditore risulta sostenibile qualora questi riesca a vivere in una circoscritta dimensione di gioco. Vivendo il business come un gioco – seppur competitivo – l'imprenditore affronta le sfide del mercato mantenendo una soddisfazione intima non priva di divertimento, che preserva anche la passione per il prodotto.

La *connecting passion*, secondo il framework proposto dagli autori, si configura rispetto ad alcuni elementi dinamici con cui l'imprenditore si confronta, necessariamente, nel suo percorso, e che contribuiscono a definire la dimensione di gioco in cui lo stesso vive ed opera:

- l'auto-percezione della propria identità di consumatore e dei valori di consumo perseguiti come autentici ed imprescindibili, e dunque fautori di continuità;
- un processo di sperimentazione dal risvolto sia materiale (evoluzione delle idee e dei prodotti) sia personale (maturazione in termini di competenze e skill oltre che di esperienza);
- lo spazio comunitario, fisico e digitale, che sostiene la passione nella conciliazione tra consumo e impresa, nonché l'engagement dell'imprenditore nel tempo.

In particolare, quest'ultimo elemento, e il rapporto che egli vi intrattiene, rappresenta una discontinuità rispetto ai modelli di *user entrepreneurship* e di *tribal entrepreneurship*. La comunità non si limita ad essere un contesto di confronto e sperimentazione di innovazioni né un mercato circoscritto a cui rivolgersi, ma una presenza viva, attiva e dinamica che ricopre entrambi i ruoli, nonché quello di terreno di gioco in cui l'imprenditore-consumatore si realizza. Proprio la dinamicità manifestata dai connotati e dai presupposti della *connecting passion* ci spinge a proporre un'estensione del modello tramite l'applicazione ad un mercato artistico e culturale, animato da una comunità di consumo aperta alla sperimentazione.

3. Metodologia e Obiettivi

Il contesto da noi prescelto è quello del mercato editoriale del fumetto italiano, di cui forniamo un breve inquadramento in funzione della definizione degli obiettivi della ricerca.

La scelta di questo mercato è stata orientata prevalentemente da fonti secondarie, editoriali, comunicati stampa, e dati empirici derivanti dall'osservazione del mercato: a fronte di questa analisi preliminare, ci è stato possibile riconoscere in questo mercato caratteristiche della domanda e dell'offerta coerenti con i presupposti della *connecting passion* qui adottata come base teoretica di riferimento.

Dal punto di vista della domanda, si evidenzia un contesto comunitario vivace e coinvolto, che popola attivamente spazi di interazione tanto fisici (es. fiere e festival) quanto digitali, manifestando un legame con il prodotto individuale e collettivo. Nella maggioranza dei consumatori, la passione per il prodotto-fumetto si sviluppa nei primi anni di età e matura insieme ad essi, ispirandone talvolta anche l'indirizzo professionale. Sono molti, infatti, i consumatori appassionati che si impegnano fin da giovani in una formazione artistica ai fini lavorativi, per ricoprire ruoli specifici della produzione del fumetto. Sono soprattutto questi soggetti emergenti ad attivare o a partecipare ad iniziative di imprenditorialità non convenzionale, che solo recentemente si stanno convertendo in formali strutture societarie,

per iniziare a farsi conoscere e sottoporre, contemporaneamente, le proprie opere all'attenzione e al giudizio della comunità.

Da un lato, vi sono iniziative esclusivamente digitali quali le online communities specializzate o le piattaforme di crowdfunding; dall'altro, emergono numerose aggregazioni dalla forma più elementare rispetto a quella della casa editrice, quali le associazioni culturali e i collettivi di autoproduzione, guidati in prima persona da consumatori appassionati e/o artisti. Proprio a partire da queste iniziative si sviluppano le piccole e medie case editrici del settore, che vengono a contrapporsi ai grandi gruppi editoriali leader del mercato.

Dal punto di vista dell'offerta, pertanto, si evidenzia una compresenza di molteplici attori di diversa dimensione e dall'indirizzo strategico radicalmente differente: mentre i grandi del mercato competono sull'acquisizione dei prodotti e dei titoli di massa internazionali più richiesti e dibattuti dalle communities di appassionati, per garantire un'ampia adesione alle proposte, i piccoli e medi esordienti si stanno ritagliando il proprio spazio con offerte distintive, più capillari e sensibili, altamente specializzate e rivolte a nicchie più circoscritte.

La realtà di queste case editrici ci appare un contesto interessante in cui testare il concetto di *connecting passion*, per i seguenti motivi:

- l'imprenditore che guida queste realtà imprenditoriali assume contemporaneamente non solo l'identità di consumatore ma anche quella di artista;
- 2. il prodotto commerciale oggetto tanto della passione quanto del business ha una natura fortemente artistico-creativa nonché culturale.

Ci chiediamo pertanto se la passione può confermarsi un efficace mediatore e connettore tra più identità conviventi nello stesso soggetto, di cui quella prettamente produttiva e creativa è distinta da quella imprenditoriale, e se la natura peculiare del prodotto – pur commerciale – influenzi l'emergere di dinamiche distintive, anche in termini di relazioni con l'ambiente-mercato in cui il soggetto opera.

L'obiettivo della ricerca è quello di indagare le motivazioni e i driver sottostanti alla scelta dell'artista-consumatore di intraprendere successivamente una venture editoriale, tenendo conto delle ulteriori complessità presentate da questa sfida e dalla potenziale limitazione creativa e personale dettata dalla necessità di mantenere un'immagine aziendale coerente ai fini di business.

In particolare, sono state formulate le seguenti domande di ricerca:

- a) Quali sono gli elementi della *connecting passion* in un contesto di mercato dettato da una forte identità culturale ed artistica, in grado di veicolare la creatività dell'artista verso un preciso segmento di mercato?
- b) Quali sono le dinamiche in grado di soddisfare le identità del soggettoimprenditore consentendogli di portare avanti il business nel tempo?

La ricerca così definita ha richiesto una fase preliminare di analisi del mercato e delle sue tendenze, volta a tratteggiarne un quadro esaustivo dell'ambiente socio-comunitario e competitivo e a verificarne la coerenza rispetto alle nostre necessità. Coerentemente con Eisenhardt (1989), la raccolta dei dati provenienti da fonti secondarie, online e offline, è avvenuta nella fase iniziale della ricerca, precedente alla definizione puntuale degli obiettivi e all'individuazione dei possibili soggetti partecipanti. La selezione finale degli intervistati è avvenuta secondo i seguenti criteri di similarità:

- nuove imprese, fondate tra il 2013 e il 2015, di piccola dimensione ed esordienti in uno dei momenti di maggiore vivacità del mercato;
- imprenditori-editori appassionati, già professionisti attivi da anni nel mercato in qualità di autori, coloristi, sceneggiatori, character designer, etc.;
- prodotti offerti tra loro differenziati per tematiche e stile artistico, per cogliere l'impatto di eventuali variabili legate al target e/o al genere letterario di appartenenza.

Nella tabella 1 viene presentato un quadro riassuntivo dei 3 casi aziendali e dei profili degli imprenditori coinvolti nella ricerca, per i quali è stato mantenuto l'anonimato. Possiamo tuttavia evidenziare che si tratta di aziende ormai affermate all'interno del mercato, realtà piccole ma solide, i cui brand e prodotti, nel corso dell'anno 2019-2020, si sono affacciati anche sul panorama europeo, ed in particolare franco-belga.

Trattandosi di un'indagine esplorativa, per la raccolta dei dati è stata prescelta la modalità qualitativa dell'intervista diretta, condotta sottoponendo ai partecipanti una traccia strutturata composta di 12 domande articolate intorno agli obiettivi di ricerca precedentemente delineati, coerentemente con le aree di analisi individuate dalla letteratura preesistente e da noi già illustrate. La ricerca empirica è stata condotta nel periodo ottobredicembre 2019: in un caso ci è stato possibile visitare personalmente la casa editrice, mentre le altre due interviste sono state raccolte presso gli spazi espositivi nel corso dell'importante fiera di settore Lucca Comics & Games.

Per l'analisi del dato qualitativo raccolto, invece, si è scelto di adottare la procedura della *cross-case analysis* (Yin, 2015; Dubois & Gadde, 2014), ovvero un confronto incrociato tra le informazioni ricavate dai rispettivi casi, sotto forma di trascrizione delle interviste effettuate. Lo studio è stato incentrato sull'individuazione e la successiva comparazione di *verbatim* – quali principali risultati empirici - al fine di cogliere il più autenticamente possibile la percezione e l'esperienza degli intervistati (Kassarjian, 1977) rispetto ai temi di ricerca individuati. Gli autori hanno provveduto separatamente alla lettura della trascrizione delle interviste e all'individuazione di *verbatim* significativi, confrontandosi in seguito per derivarne le tematiche emergenti e ricostruire il modello che sarà presentato nella sezione dedicata alla discussione.

Tab. 1: Breve profilo delle aziende analizzate

Azienda	Profilo	Tipologia prodotto	Esordio
Alfa	Fondata grazie ad una campagna di crowdfunding legata al pro- dotto di punta. L'imprenditore ha una formazio- ne specializzata in quale disegna- tore e colorista.	Fumetto «popolare» su tematiche di avventura e di fantasia, con caratteri di innovazione stilistica e tecnica e qualità molto elevata, da collezione.	2015
Beta	La casa editrice ha come mission il supporto ad un genere stilisti- co innovativo, che ibrida i canoni asiatici. La stessa imprenditrice è stata tra i primi autori italiani ed europei a sperimentare questo genere nelle sue opere.	1	2015
Gamma	L'azienda esordisce nel mercato come collettivo di autoproduzioni incentrata sui fumetti digitali, per poi riproporsi con prodotti cartacei. L'imprenditore è un noto sceneggiatore e letterista, che ha iniziato la sua stessa carriera autoriale in autoproduzione.	tecniche narrative. Gran parte dei prodotti sono di- retti a consumatori adulti, ma nel 2017 è stata creata una linea di	2013

Fonte: nostra elaborazione

4. Risultati della Ricerca

Si propongono di seguito i principali risultati dell'analisi empirica effettuata, con l'identificazione dei seguenti temi emergenti:

4.1 Connecting passion: vivere il business come uno spazio creativo

Coloro che vivono una *connecting passion* si esprimono nella loro passione facendo business. Dalla nostra ricerca, emerge come gli imprenditori intervistati considerino la creatività alla base della produzione del fumetto quale driver della loro idea di fare impresa.

Per creatività si intende una dimensione di libertà nella quale l'individuo esprime pienamente sé stesso (Whitinh & Hannam, 2015). La *connecting passion* degli imprenditori intervistati si configura quindi nel vivere il business come uno spazio creativo e di auto-espressione.

In Alfa l'imprenditore crea attraverso il coinvolgimento degli altri. Infatti, egli racconta che: "abbiamo visualizzato fin da subito la nostra mission: supportare artisti emergenti nella realizzazione di progetti [creativi] e di idee da destinare ad un mercato". É con questi artisti che l'imprenditore condivide uno spazio creativo facendo anche attività di business. Situazione simile caratterizza Beta il cui titolare identifica quale mission dell'impresa: "dar vita

ad uno spazio per tutti quei giovani e talentuosi autori italiani che, a causa del loro stile manga o comunque ibridato con esso, non riescono a trovare spazio all'interno del mercato fumettistico italiano". Tale spazio è "un luogo virtuale in cui è possibile rendere questa nostra passione un lavoro vero e proprio: la casa editrice, appunto". Lo spazio creativo in cui il titolare di Gamma si esprime sembra avere confini più estesi rispetto a quelli di Alfa e Beta dato che la forma di impresa è quella del collettivo di autoproduzione quale "struttura di aiuto, di aggregazione, per tutti quelli che si vogliono autoprodurre (...) dando la possibilità di creare del materiale di qualità professionale e rendendo più facile farsi notare e distribuire". É uno spazio tramite cui si ambisce ad alimentare un business. Il titolare aggiunge infatti che "presto cambieremo tipo di società (...) per crescere anche se vogliamo continuare a lavorare con il nostro spirito originale".

4.2 Sperimentazione

Esprimendo la loro passione nel creare facendo business gli imprenditori sono impegnati in una continua attività di sperimentazione. Questa, come spiega il titolare di Alfa, "ci ha dato un impulso creativo pazzesco: più conosci il mezzo, più riesci a piegarlo alle tue necessità" (Alfa). In Beta essa ha spinto "a creare un nuovo genere narrativo, opere dal design fresco e innovativo, con contenuti originali"". Sia in Alfa che in Beta, la sperimentazione è orientata alla creazione di un prodotto esperienziale in grado di "far vivere avventure e storie sempre diverse e fantastiche" (Alfa) e "immergere il lettore in grandi storie o saghe simil-cinematografiche senza dover investire capitali hollywoodiani" (Beta). La sperimentazione può inglobare anche l'uso di tecnologie, che non trovano però dimora stabile nelle produzioni delle imprese indagate. Anche se in Alfa il prodotto di punta è un fumetto cartaceo realizzato con una tecnologia che riproduce su stampa la colorazione digitale, il suo titolare sostiene che "si deve ancora inquadrare per bene una destinazione digitale del fumetto". Dello stesso avviso è il titolare di Gamma secondo cui: "anche se sperimentiamo progetti digitali da fruire tramite l'iPad, il fumetto digitale non è ancora pronto". In Beta, il titolare si limita a seguire sperimentazioni crossmediali in Francia, consapevole del fatto che: "il digitale potrebbe offrire soluzioni che su carta non si possono rendere, le possibilità sono infinite, bisogna solo saper sperimentare e divertirsi".

La sperimentazione alimenta inoltre le connessioni tra artisti. "A livello organizzativo, il lavoro da autore e quello da editore non sono così diversi, questo perché già come autore e sceneggiatore mi trovo a dirigere il lavoro di artisti in maniera da tirare fuori insieme un bel fumetto" (Gamma). La gestione di tali connessioni rafforza il creare come spazio collettivo, e permette inoltre di acquisire chiavi interpretative del mercato. Il titolare di Alfa si esprime dicendo che: "come editori, abbiamo l'esperienza per guidare i giovani disegnatori a fare le scelte creative e, questi invece, hanno quella sana intraprendenza giova-

nile che ci aiuta a capire il mercato e ad allinearci ai trend contemporanei". Non tutti gli artisti però sono ammessi alla sperimentazione: lo spazio creativo condiviso che alimenta il creare facendo business è uno spazio selettivo. In Beta, la selezione avviene sulla base del "rispetto di certe caratteristiche di stile essendo la nostra linea editoriale supportata dalla nostra passione verso la tecnica manga o similare". In Alfa, invece, come dice l'imprenditore "valutiamo anche la personalità dell'artista, perché crediamo che siano importanti in egual misura sia la competenza tecnica che il valore della persona". In Gamma si è "disposto ad investire su persone il cui lavoro autonomo penso sia ottimo, anche se devono accettare le mie infiltrazioni ne lavoro corrente".

4.3 Tensione tra ruoli

Nel creare facendo business gli imprenditori vivono con tensione il doppio ruolo di artisti e di manager. Il titolare di Alfa osserva quanto segue: "fare il fumettista e l'editore non è per niente facile, è un lavoro pieno di scelte difficili e molti sacrifici". Secondo il titolare di Beta "in questo settore solo chi ha molta perseveranza riesce a raggiungere i propri obiettivi"; essa però sembra aver trovato un suo equilibrio in quanto asserisce: "rispetto a quando ho iniziato, ormai sto prendendo il ritmo, quindi probabilmente è solo questione di abitudine. Sono certa che, continuando in questo modo, riuscirò a capire come conciliare bene le due cose, senza nulla togliere a una cosa o all'altra". C'è chi cerca un suo equilibrio programmando il tempo da dedicare ad un ruolo piuttosto che all'altro. Da Alfa emerge che "facciamo convivere questi grossi progetti e stili di vita sperando che un giorno la parte editoriale (...) possa conquistare una sua autonomia più marcata, in modo da poter ritornare con un po' più di tranquillità alla produzione artistica vera e propria". Anche l'imprenditore di Gamma sembra intenzionato a dedicarsi di più a progetti artistici: "Sono assolutamente sempre un fumettista, anche se al momento sto scrivendo molto meno tempo; mi dà molto fastidio ma sto rimettendomi al lavoro su un po' di cose mie abbastanza impegnative e ne sono contento".

4.4 - Continuità tra self del consumatore e self dell'imprenditore.

La passione dei nostri imprenditori per il fumetto è iniziata quando erano molto giovani. il titolare di Alfa racconta che "Fin da molto piccoli, siamo stati dei grandi consumatori e questo molto probabilmente ci ha formati sia nel nostro immaginario, che nei nostri gusti e aspirazioni". Anche l'imprenditore di Gamma ama narrare che "leggendo da piccolo certe storie mi sono reso veramente conto della magia del fumetto (..) da quel momento ho deciso che in un modo o nell'altro avrei lavorato in quel campo". Questa passione accomuna anche i collaboratori di Gamma dove come spiega il suo titolare "Prima di essere del mestiere eravamo tutti appassionati di fumetto sin dalla tenera età. Molti

dello staff hanno iniziato da bambini con Topolino, e poi, sono passati dal fumetto italiano a quello americano e giapponese". La passione per il fumetto è rimasta ancora oggi: "Tutto è nato dalla passione e tutto è rimasto in passione; tuttora leggo una quantità spropositata di fumetti che divoro molto in fretta" (Gamma). Tale passione la si vive attraverso la passione per il business. Il vivere da imprenditore la passione come la si viveva da consumatori contribuisce a leggerla in una chiave di mercato. "Continuiamo ad essere consumatori accaniti, poiché pensiamo che sia molto importante tenersi aggiornati sulle tendenze del momento, le innovazioni negli schemi narrativi e su come va il fumetto in generale" (Beta). Come spiega Alfa, da consumatori la passione per il fumetto li ha portati a rafforzare la propria attività creativa "Si è trattato di un passaggio del tutto naturale (...) siamo passati alla necessità di creare una realtà editoriale per produrre la nostra personale idea di libro". E creando, riescono ad alimentare la passione facendo business. "Il fumetto manga è il preferito di quasi tutti noi, ed è stato quindi naturale, per noi, voler indirizzare la casa editrice verso questo genere a noi più vicino (...). Essendo appassionati di fumetto e leggendone tantissimi, era facile voler iniziare a nostra volta a creare qualcosa di simile a ciò che leggevamo". Il titolare di Gamma spiega che "scrivere mi fa arrivare a livelli che mi permettevano di provare piacere in quello che facevo (...); mi sono inventato autore ed ho deciso di diventa editore continuando a creare autoproducendo (...) per questo abbiamo fondato Gamma con l'intento di aiutare gli altri". Esiste dunque una continuità tra il self del consumatore ed il self dell'imprenditore: in particolare, il creare ha permesso di traghettare il self del consumatore nel self dell'imprenditore-artista.

4.5 Competizione: minaccia al creare

Alimentare la propria passione, creando e contemporaneamente facendo business può trovare ostacolo nella competizione. Le parole del titolare di Alfa sono emblematiche in tal senso: "si può creare competizione, a volte anche malsana (...) piccole guerre tra competitors, per mettersi i bastoni fra le ruote, (...) i grandi che controllano le dinamiche del mercato non lasciando spazio ai piccoli agonizzanti nella loro ricerca di una goccia d'ossigeno creativo". Se da un lato la competizione soffoca la creatività delle piccole imprese, come evidenzia l'imprenditore di Beta," è però anche uno stimolo a voler dare sempre il meglio di noi, sia come autori che come editori, e questo è senz'altro positivo per la crescita del mercato". Per rimanere creativi pur facendo business la collaborazione è vista come un'arma per attenuare la competizione. Sempre da Beta infatti emerge che "nell'arte c'è competizione, e questo da una parte ci rattrista perché siamo dell'idea che sia sempre meglio collaborare tra noi, piuttosto che lottare e farci guerra".). L'ottica di collaborazione è un qualcosa che Beta sente naturale dato che il suo mercato è molto ristretto (fumetto manga italiano). Si tratta di un'ottica che presuppone la convinzione secondo cui

"non dobbiamo vedere concorrenti sul mercato, ma prevalentemente colleghi...purtroppo ci sono anche dei soggetti che giocano sporco" (Gamma). Essa trova il suo fondamento nella passione condivisa e nella voglia di far evolvere il fumetto preservandolo nel tempo. Infatti come il titolare di Gamma specifica: "posso dire che, obiettivamente, di solito chi fa questo mestiere per passione gioca pulito, lo fa perché gli piace veramente farlo, prevale la voglia di fare bei fumetti sull'idea di fare la guerra all'altro. Altri, invece, vedono il fumetto più come un business che non come una vera e propria passione".

4.6 La comunità di consumo

Nel creare alimentando la propria passione facendo business, i nostri imprenditori si rivolgono ai loro target. Questi non sono dei segmenti di mercato ma delle comunità di persone che condividono la passione per il fumetto. Il target di Alfa, come spiega il titolare è dato da "consumatori sani e intelligenti, che hanno voglia di intrattenersi con libri di avventura e di fantasia dall'alto livello tipografico e narrativo. Beta si rivolge prevalentemente ad "un pubblico giovane che ama il nostro genere, storie in cui riesce a riconoscersi". Più esteso è il target di Gamma dato che come il suo titolare precisa, "ci rivolgiamo ad una comunità di appassionati offrendo diverse linee".

Verso questi segmenti, gli imprenditori assumono, a vario titolo, un ruolo formativo nei confronti dei membri della comunità. Alfa parla di "guidare e alfabetizzare (...) dal punto di vista del sano intrattenimento con appeal
culturale"; Beta si pone verso gli adolescenti "cercando di educarli alla vita e
affrontando nei nostri fumetti tematiche anche pesanti". Gamma, infine, è insegnante alla Scuola Internazionale di Comics, esperienza che gli permette
"di dare effettivamente ai ragazzi che escono dalla scuola la possibilità di avere
qualcuno che li ascolti (...), di imparare come proporsi (...), di ricevere spiegazioni
sugli errori fatti. In questo senso, rimango insegnante anche come editore".

Alfa, Beta e Gamma raggiungono i loro target adottando adeguatamente i canali distributivi ed i media a disposizione. Ma tra questi ultimi, quello che più di altri crea uno spazio in cui si interagisce con il target condividendo la passione per i fumetti è la fiera. "La fiera permette anche a noi più piccoli di poterci esprimere mentre condividiamo e salvaguardano la propria passione" (Alfa). "La fiera è un ottimo modo per far conoscere la nostra realtà, e per noi sono importanti più che per altri editori affermati" (Beta). "La fiera permette di vedere la persona in faccia che è ben diverso dal leggere una mail o due righe di commenti (...) diventa bello poter affrontare curiosità, rispondere e creare un bel rapporto". La fiera è un contesto in cui l'imprenditore torna a vivere quella comunità di appassionati che già frequentava da consumatore. Immergendosi in essa agisce da imprenditore ma pensa da consumatore. Emblematiche sono le parole del titolare di Gamma che riferisce: "se dopo la fiera ci viene mandata una mail (...) è importante dare risposta (...) vogliamo restare quanto più possibile vicino ai

lettori anche e proprio perché siamo noi i primi ad essere lettori (...) "alla fiera riesco a rivivere le emozioni che vivevo da consumatore preferiscono questi momenti all'uso dei social network che possono corrompere la natura pura dei nostri prodotti". Il titolare di Beta vede più in generale Internet "come canale di vendita sia come canale di informazione (...) ma non può sostituire la fiera, un ambiente che anche prima di diventare imprenditori frequentavamo e che permette di conoscere il nostro pubblico" La fiera è il luogo in cui insieme agli altri rafforza il suo vivere il business come viveva la sua passione da consumatore alimentando al tempo stesso una certa conoscenza di mercato.

5. Discussione ed implicazioni teoriche

L'analisi delle caratteristiche della connecting passion all'interno del settore indagato ha portato all'individuazione di un paradigma che permette agli imprenditori di vivere il business come spazio creativo e di autoespressione, alimentato dai seguenti elementi (Fig. 1), che di seguito trattiamo.

PRESUPPOSTI DELLO CREATIVITA' COME ELEMENTO DI SPAZIO CREATIVO CONTINUITA' TRA SELF CONNECTING PASSION tra creatività SPERIMENTAZIONE e impresa TENSIONE TRA RUOLI ELEMENTI DELLO CONNETTIVA SPAZIO CREATIVO Vivere il business come uno SPAZIO **CREATIVO EVOLUZIONE E** COMPETIZIONE COMUNITA'-SOPRAVVIVENZA DELLO COLLABORATIVA **MERCATO** SPAZIO CREATIVO

Fig. 1: Dialettica tra gli elementi della connecting passion in ottica di ponte tra creatività ed impresa

Fonte: nostra elaborazione

Continuità del self tramite il creare. Il presupposto del vivere il business come spazio creativo è la continuità tra self del consumatore e self dell'imprenditore. Questa conciliazione avviene tramite l'atto del creare, che alimenta la loro passione permettendogli di esprimersi nel business così come da consumatori si esprimevano nell'uso del prodotto-fumetto, che rappresenta un punto fermo nella loro evoluzione. Creando, il self del consumatore converge nell'imprenditore permettendogli al contempo di rimanere artista. Questo processo preserva l'autenticità dei self che convivono nell'individuo, ed al contempo aiuta l'imprenditore a saper cogliere cambiamenti nel mercato con una maggiore sensibilità dovuta al proprio vissuto.

La sperimentazione connettiva. Vivere il business come uno spazio creativo lascia all'imprenditore la libertà di fare sperimentazioni. É un elemento che connette la dimensione intima e personale dell'artista e del consumatore con quella organizzativa e di business propria dell'imprenditore. L'innovazione generata non è infatti fine a sé stessa, ma finalizzata alla creazione di un prodotto di cui l'imprenditore-artista assume pienamente il rischio di mercato. Essa si sviluppa inoltre attorno all'interazione di artisti che sono portatori di creatività ma anche di conoscenza di mercato, tramite i quali si possono intercettare tendenze latenti tra gli appassionati di fumetti. La sperimentazione che Alfa, Beta e Gamma attuano è una sperimentazione connettiva: vive di connessioni tra artisti e, tramite questi, prende forma all'ascolto indiretto del mercato.

Non è tuttavia aperta a tutti, in quanto ha luogo entro uno spazio creativo ristretto e riservato ad artisti selezionati, verso i quali si crea un rapporto privilegiato di mecenatismo.

Tensione da consapevolezza del doppio ruolo. Nel creare facendo business, gli imprenditori sono sia artisti che manager. Il vivere con consapevolezza questo doppio ruolo genera in loro tensioni relative al tempo: non è possibile essere operare contemporaneamente come manager e come artista. Ci si sente tirati verso l'essere artista o verso l'essere manager a tal punto da essere portati a pianificare il tempo da dedicare ad un ruolo piuttosto che all'altro. Per quanto si tratti di una decisione talvolta sofferta, come emerge dal racconto degli stessi imprenditori, si dimostra oggettivamente efficace nel contribuire alla crescita ed alla sopravvivenza dell'attività di impresa nel tempo.

Collaborare per competere. Vivere un clima competitivo può essere un ostacolo alla possibilità di creare facendo business. Se da un lato questo porta a migliorarsi, dall'altro ostacola la creatività dei piccoli editori, che vivono con insofferenza una concorrenza eccessivamente agguerrita. Per fare business rimanendo creativi occorre attenuare la competizione tramite la collaborazione tra produttori. Questa deve essere animata dal condividere una stessa passione che non è tanto (non è solo) quella di fare fumetti, ma di contribuire alla loro evoluzione nel tempo. L'obiettivo di questa mossa è duplice: supportare lo sviluppo del mercato è un'opportunità sia di ampliare il proprio pubblico di riferimento sia di soddisfare la propria passione personale, rialimentata dalla presenza sul mercato di opere e prodotti sempre nuovi e diversi, che l'imprenditore fruisce in qualità di consumatore.

Comunità-mercato. Nel creare, alimentando la loro passione e facendo contemporaneamente business, gli imprenditori hanno una percezione differente ed esclusiva della comunità di consumatori, la quale assume i connotati tanto di un *meta-mercato* che di un *meta-self*.

I loro clienti non sono dei target ma delle comunità di persone che nu-

trono passione per il fumetto e, nello specifico, per la tipologia di prodotto offerta. Questa comunità non è qualcosa che l'imprenditore vive come un'entità esterna: egli la incontra, interagisce con essa e cresce con essa. Il dialogo che si instaura tra il meta-mercato e l'imprenditore è costruito su delle finalità educative: l'imprenditore soddisfa il proprio self di artista educando il pubblico e riuscendo a divulgare la propria visione artistica nonché i valori che intende promuovere, e ricevendone feedback e commenti. Il luogo di incontro è la fiera. Lì l'imprenditore vive il business nella prospettiva di come da giovane viveva la passione per il fumetto, confrontandosi con gli altri consumatori su un terreno condiviso. In questo modo riesce ad alimentare la conoscenza del mercato tramite la comunità, nonché a mostrare la propria autenticità ai consumatori.

L'identificazione di questi elementi permette di effettuare un confronto diretto con il modello di riferimento di *connecting passion* espresso in Ranfagni e Runfola (2018).

Innanzitutto, il concetto di connecting passion che emerge nel presente paper condivide con quello proposto dagli autori lo stesso presupposto fondante: gli imprenditori manifestano un self autentico attraverso l'esercizio dell'attività d'impresa, riuscendo a conservare una certa continuità con le proprie identità di imprenditore-artista e di consumatore. Il concetto di passione-ponte risulta dunque coerente per descrivere imprenditori che fanno business senza rinunciare alla propria passione – la quale, anzi, ne orienta l'evoluzione professionale.

É nell'individuazione dei fattori e delle dinamiche con le quali la *con*necting passion si manifesta che emergono alcune caratteristiche divergenti, che appaiono tipiche di questo mercato dai connotati artistico-culturali.

Nel concetto proposto da Ranfagni e Runfola, 2018, la connecting passion porta l'imprenditore a vivere il business come un gioco competitivo quale spazio di libertà individuale. In questa sede, emerge invece che il business non è vissuto come un gioco, ma come uno spazio creativo. Creando ci si esprime nella passione facendo business: la creatività è tanto il ponte tra passione per il fumetto e business quanto l'elemento che permette la compresenza dei self di consumatore, artista ed imprenditore. Questo ha delle conseguenze anche sulla sperimentazione. Mentre nel concetto originario essa è prerogativa del consumatore-imprenditore e della sua individualità; i risultati della nostra ricerca; evidenziano come essa assuma i connotati della sperimentazione connettiva e si alimenti del rapporto con gli altri artisti e con il mercato. All'interno del mercato culturale indagato, pertanto, l'impresa appare un ambiente in cui gli imprenditori vivono in una sorta di-laboratorio artistico insieme ad artisti la cui creatività si combina con la loro capacità di catturare certe nuove tendenze emergenti tra i consumatori di fumetti.

Inoltre gli imprenditori che sono portati a vivere il business come spazio creativo vorrebbero fuggire dalla concorrenza, ricercando un clima di

collaborazione in modo da non compromettere le loro attività creative; laddove, invece, nel paradigma originario, la concorrenza **è** parte integrante dello stesso gioco, e come tale direttamente affrontata.

Infine, coerentemente con lo studio di Ranfagni e Runfola (2018), la connecting passion si alimenta tramite la comunità. Essa ha un ruolo essenziale, essendo frequentata sia in quanto spazio di mercato sia in quanto spazio privato. Attraverso la sua frequentazione, gli imprenditori riescono a rafforzare il proprio legame con una passione per il fumetto ed a viverla come se fossero dei consumatori e al contempo, riescono a cogliere naturalmente alcuni *insights* da parte del pubblico, utili per la crescita d'impresa.

Il rapporto che gli imprenditori ricercano con la comunità è comunque intenso. Essi manifestano infatti la volontà di valorizzare la propria passione ed esperienza agendo in qualità di mentori, insegnanti e mecenati, ovvero di educare i nuovi consumatori e di fungere da sostegno ai giovani autori emergenti sul mercato. In questo senso, la volontà di fare business, superando anche la tensione e le difficoltà derivanti dalla consapevolezza di ricoprire diversi ruoli, si interseca con la volontà di partecipare all'evoluzione del mercato, oltre la mera logica di ampliare il target.

6. Conclusioni

I risultati fin qui presentati e discussi contribuiscono ad arricchire il profilo della *connecting passion* e del modello proposto in Ranfagni e Runfola (2018). L'osservazione dei comportamenti e delle motivazioni manifestate dagli imprenditori coinvolti nella nostra ricerca ha evidenziato come la forte componente artistico-creativa del prodotto e del mercato abbia un impatto anche sulla percezione del business e della mission maturata dall'imprenditore.

Dal punto di vista manageriale, il nostro studio evidenzia come sia possibile, anche in contesti di mercato diversi o distintivi, perseguire contemporaneamente il proprio business e la propria passione, dati certi fattori che permettono di vivere il business come il tramite per continuare ad esprimersi. Dallo studio emerge altresì un limite di fondo che caratterizza questa dinamica imprenditoriale, dato dalla netta predominanza della componente identitaria sul business.

L'imprenditore che vive una connecting passion alimenta la passione esprimendosi nel business, riuscendo così a trovare un suo equilibrio di fondo che garantisce la prosecuzione dell'attività di impresa. Non essendo tale equilibrio risultato di comportamenti codificabili ma risultato dell'agire soggettivo dell'imprenditore, frequenti saranno le situazioni in cui non si riesce ad abbracciare contemporaneamente le dimensioni di creatività e di business. La capacità di coltivare la propria passione facendo business appare dipendente dalla sensibilità individuale e dall'abilità della persona

nel mantenere, consapevolmente, una continuità nei ruoli ricoperti, a discapito della tensione percepita. In assenza di tale sensibilità l'individuo tende necessariamente verso un unico ruolo; ovvero, può tornare artista (dedicandosi esclusivamente al lato creativo della propria passione) o diventando un imprenditore puro, orientato alle logiche di mercato ma privo della propria purezza ed autenticità.

Questo rischio pone alcuni spunti di ricerca futura, volti ad individuare le forze che impattano sul mantenimento o sulla rottura dell'equilibrio tra passione e business.

Innanzitutto, potrebbe essere opportuno sviluppare una prospettiva di analisi evolutiva, al fine di cogliere l'influsso di fattori congiunturali, cambiamenti sostanziali nel mercato (es. ruolo della tecnologia) sull'attività d'impresa e sul comportamento dell'imprenditore.

Un ulteriore ambito di ricerca, sempre ai fini di poter combinare business e passione nel lungo periodo, riguarda lo studio di un'eventuale integrazione del personale con attori esterni aventi ruoli organizzativi di supporto alla crescita di impresa ed alla sua stabilità. Trattandosi di una soluzione che potrebbe contribuire a mitigare la tensione imprenditoriale legata alla gestione del tempo da dedicare alle varie attività, sarebbe pertanto intrigante definire il profilo, le competenze ed i compiti di tali soggetti manageriali.

Alla luce di quanto esposto, riteniamo che lo studio di imprenditori che non riescono a vivere una *connecting passion* o che nel tempo hanno perduto il proprio equilibrio rappresenti un'opportunità per superare i limiti della presente ricerca, nell'ottica di un ulteriore approfondimento del concetto, dei suoi paradigmi e delle interazioni tra questi. Sono queste le traiettorie che vorremmo seguire nel continuare il nostro studio sul connubio tra passione e business.

Reference

Arnould, E. J., & Price, L. L. (1993). "River magic: Extraordinary experience and the extended service encounter". Journal of Consumer Research, 20(1), 24-45.

Baraldi, E., Guercini, S., Lindahl, M., & Perna, A. (2020). Passion and Entrepreneurship Contemporary Perspectives and New Avenues for Research: Contemporary Perspectives and New Avenues for Research. 10.1007/978-3-030-47933-6.

Belk, R. W. (1988). "Possessions and the extended self". Journal of Consumer Research, 15(2), 139-168.

Belk, R. W., & Costa, J. A. (1998). "The mountain man myth: A contemporary consuming fantasy". Journal of Consumer Research, 25(3), 218-240.

Belk, R. W., Ger, G., & Askegaard, S. (2003). "The fire of desire: A multisited inquiry into consumer passion". *Journal of Consumer Research*, 30(3), 326-351.

Breugst, N., Domurath, A., Patzelt, H., & Klaukien, A. (2012). "Perceptions of entrepreneurial passion and employees' commitment to entrepreneurial ventures". Entrepreneurship Theory and Practice, 36(1), 171-192.

Bogers, M., Afuah, A., & Bastian, B. (2010). "Users as innovators: a review, critique, and future research directions". *Journal of management*. 36(4), 857-875.

Bolton, W. K., Thompson, J. L. (2003), "The Entrepreneur in Focus: Achieve your potential", Thomson, London.

Bourdieu, P. (1979). "La distinzione. Critica sociale del gusto", Il Mulino, ediz. febbraio 2001, a cura di M. Santoro.

Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). "The nature and experience of entrepreneurial passion". Academy of management Review, 34(3), 511-532.

Cardon, M. S., & Kirk, C. P. (2015). "Entrepreneurial passion as mediator of the selfefficacy to persistence relationship". Entrepreneurship theory and practice, 39(5), 1027-1050.

Cardon, M.S., Glauser, M., Murnieks, C.Y. (2017) "Passion for what? Expanding the domains of entrepreneurial passion", Journal of Business Venturing Insights 8/2017, 24–32.

Carù, A & Cova, B. (2011), "Marketing e competenze dei consumatori: l'approccio al mercato del dopo-crisi", Milano, EGEA

Celsi, R. L., Rose, R. L., & Leigh, T. W. (1993). "An exploration of high-risk leisure consumption through skydiving". *Journal of Consumer Research*, 20(1), 1-23. Cohen, S., Taylor, L. (1992), "Escape Attempts: The Theory and Practice of Resistance in

Everyday Life", London: Routledge, pp. 92-93.

Cova, B., Cova, V. (2002). "Tribal marketing: the tribalisation of society and its impact on the conduct of marketing". *European Journal of Marketing*, Vol. 36, Issue 5/6, pp. 595-620.

Cova, B., & Guercini, S. (2016). "Passion and entrepreneurship: Toward a tribal entrepreneur?". Revue de lEntrepreneuriat, 15(2), 15-42.

Cova, B., Pace, S., Park, D.J. (2007) "Global brand communities across borders: the Warhammer case", *International Marketing Review*, Vol. 24 Issue: 3, pp.313-329.

Dubois, A., & Gadde, L. E. (2014). "Systematic combining - a decade later". Journal of Business Research, 67 (2004), 1277-1284.

Eisenhardt, K. M. (1989). "Building theories from case study research". Academy of management review, 14(4), 532-550.

Fournier S, Lee L. (2009) "Getting Brand Communities Right", Harvard Business Review, April, pp. 105-111.

Frijida, N.H. (1986) "The emotions", Cambridge University Press.

Fuggetta, R. (2012). "Brand Advocates: Turning Enthusiastic Customers into a Powerful *Marketing Force*". Hoboken, New Jersey: John, Wiley & Sons, Inc.

Haefliger, S., Jäger, P., & Von Krogh, G. (2010). "Under the radar: Industry entry by user entrepreneurs". Research policy, 39(9), 1198-1213.

Jahanmir, S. F., & Lages, L. F. (2016). "The late-adopter scale: A measure of late adopters

of technological innovations". Journal of Business Research, 69(5), 1701-1706.

Kant, I. (1985). "Antropologia Pragmatica", Laterza Edizioni

Kassarjian, H. H. (1977). "Content analysis in consumer research". *Journal of Consumer Research*, 4(1), 8-18.

Milanesi, M. (2018). Exploring passion in hobby-related entrepreneurship. Evidence from Italian cases. *Journal of Business Research*, 92, 423-430.

Nietzche, F.. (1922). "Also sprach Zorathustra: ein Buch für Alle und Keinen". Verlag von Philipp Recbam jun.

Pencarelli, T. et al.(2019) "The value co-creation in the digital business models: the Xelexia case". *Piccola Impresa | Small Business*, [S.l.], n. 2, feb. 2019.

Pinelli, M. et al.(2018) "Founders' competencies and start-up performance: an empirical analysis". *Piccola Impresa | Small Business*, [S.l.], n. 1, sep. 2018.

Pradines, M. (1958). "Traité de psychologie generale". vol. 1.

Ramalho da Silva, R. & Barboza Andreoni, R. (2013). "Cosplay subculture: extension of the self in a consumer group", in *Revista Brasileira de Marketing – REMark, Sao Paulo*, v. 12, n. 2, p. 180-202, abr/jun 2013.

Ranfagni, S., Runfola, A. (2018), "Connecting passion: distinctive features from emerging entrepreneurial profiles", *Journal of Business Research*, 92 (2018), pp. 403-411.

Ribot, T.A. (1907). "Essai sur les passions". F. Alcan

Rousseau, J.J. (1781). "Essai sur l'origine des langues". Gallimard

Shah, S. K., & Tripsas, M. (2007). "The accidental entrepreneur: The emergent and collective process of user entrepreneurship". *Strategic Entrepreneurship Journal*, $1(1 \Box 2)$, 123-140.

Thompson, J. L. (2004). "The facets of the entrepreneur: identifying entrepreneurial potential". *Management Decision*, 42(2), 243-258.

Thorgren, S., Nordström, C., & Wincent, J. (2014). "Hybrid entrepreneurship: the importance of passion". *Baltic journal of management*, 9(3), 314-329.

Thorgren, S., Sirén, C., Nordström, C., & Wincent, J. (2016). "Hybrid entrepreneurs' second-step choice: The nonlinear relationship between age and intention to enter full-time entrepreneurship". Journal of Business Venturing Insights, 5, 14-18.

Vallerand, R. J. (2015). "The psychology of passion: A dualistic model". Oxford University Press, USA.

Whiting, J., & Hannam, K. (2015). "Creativity, self-expression and leisure". Leisure studies, 34(3), 372-384.

Von Hippel, E. (2005) "Democratizing Innovation", Cambridge, MA: MIT Press.

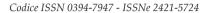
Yin, R. (2015). "Case study research: Design and methods". Beverly Hills.





Rivista Piccola Impresa/Small Business

n. 1, anno 2021





REVIEW: I. LIGHT AND L. P. DANA, L. P., ENTREPRENEURS AND CAPITALISM SINCE LUTHER: REDISCOVERING THE MORAL ECONOMY, LEXINGTON BOOKS, 2020.

Francesca Sgrò
University of Urbino
francesca.sgro@uniurb.it

Article info

Keywords: History of business; Capitalism; Entrepreneurship

doi: 10.14596/pisb.2854

Abstract

The book provides an overview of the history of business, capitalism, and entrepreneurship from Martin Luther to Donald Trump in order to highlight the role of social and cultural capital in encouraging business activities. The Authors, Ivan Light and Léo-Paul Dana, examine the availability of social and cultural capital through the analysis of six case studies that illustrate how these forms of capital have evolved from capitalism's early stages to today. From the analysis emerges that, in capitalism's early stages, entrepreneurship was mainly driven by social capital, connections were essential to encourage and legitimize business activities; conversely, when capitalism was well established, cultural capital became crucial for entrepreneurship than social capital. Finally, Light and Dana concluded that, to date, the most persistent entrepreneurs are those who retain strong social capital in terms of community ties; in contrast, if lacking social capital, elite entrepreneurs rely on money.

Review

Gary Backer was one of the first classical economists to recognise the importance of human capital as a profitable source of social and economic growth. The author of the publication 'Human capital' underlined the key role of workers' and employees' knowledge and skills regarding the effectiveness of a production process and the quality of its output. Therefore, investments in people's knowledge and skills are not seen as a cost but as a resource leading to profits.

Backer's research forms the basis of Pierre Bourdieu studies and the developing point for the formulation of additional forms of capital. According to Bourdieu the 'forms of capital', that should be added to key resources such as human, physical and financial capital, can be divided into social, cultural, and symbolic capital. Specifically, social capital is made up of relationships that link one to other people and in turn, create a contact network. By cultural capital, the Author intends social acceptability; while, the term symbolic capital, expresses issues related to who knows you and for what. These factors can be related to fame, celebrity, and reputation. These resources are dynamically interrelated, require investments of money and time to be acquired, improved, and maintained in order to generate profits.

A business owner who lacks these forms of capital has a deficiency, not an advantage. In fact, cultural capital sets up the foundation for the desire and the ability to become an entrepreneur in terms of values, attitudes, and, beliefs that encourage business ownership. Instead, social capital shapes an effective network which is able to gain and develop new resources and additional abilities. All these capitals are culturally-acquired and class-linked.

At this point, Ivan Light and Léo-Paul Dana, the Authors of this volume, began to investigate how these forms of capital evolved in different historical contexts, assuming that in the early period of capitalism, cultural capital was a rare resource and its lack represents a limitation to access on business ownership and that social capital, in contemporary capitalism, is scarce but, whether abundant, would encourage to become self-employed.

In Europe, capitalism came about during the Sixteenth Century simultaneously with the Protestant Reformation guided by Martin Luther. The Reformation has profoundly affected the relationship between religion and the economy, especially regarding the interpretation of work and business success related to religious merits. In other words, the successful business enjoyed God's approval and lead to salvation; poverty is God's disfavour and would inherit damnation.

The advent of a business-friendly culture led to an increase in the sense of entrepreneurship and generated a high-quality labour force of co-religious. In the Catholic view, capitalism was immoral and Jew's activities of lend

money without performing any work were considered outrageous.

In fact, for Catholics, entrepreneurial profits were the result of investments in the entrepreneur's skills and labour. Nevertheless, Jew's cultural capital and social capital were fundamental for the development of capitalism, especially for Italy. Jews owned strong social capital developed through the diaspora and could count on solid cultural capital in terms of skills and competencies developed in synagogues. However, strong social and cultural capital, without, religious legitimation, transformed the Jewish business activities the objective on which pour society's fury.

Five centuries later, on Kodiak Island, Aleuts (an indigenous group) benefited from strong social capital; despite this, it was not enough to encourage entrepreneurship. In fact, the Authors sustained that even if social capital promotes entrepreneurship, the business activities are encouraged only when supported by vocational culture directed to commercial entrepreneurship.

The advent of capitalism in Islamic countries has brought numerous changes in the economic and social context given that looking for profit was considered immoral and a threat to social order and ethical behavior. Therefore, to respond to capitalism challenges, numerous remedies had been undertaken to protect communities from the market economy. For example, the Memos of Karachi, the most entrepreneurial community in Pakistan, has sought to harmonize capitalism with religious requirements by interpreting the figure of the business owner as an honest person that follows Islamic values and beliefs rather than its vanities or material ambition. Hence, Memo's entrepreneurship was community-derived and it depended more on social capital than cultural capital.

During the time-frame 1970-1980, numerous Koreans moved to Los Angeles and built an empire made of independent businesses covering a wide range of activities, from retail to service and manufacturing industries. Korean immigrants to run these small businesses strongly relied on financial resources provided by ROSCA (rotating savings and credit associations). This system of microfinance was based on mutual trust and social bonds and represented the main support for the development of Korean entrepreneurship.

As foreigners in Los Angeles, the business success of Koreans was related to well defined cultural capital (since childhood, Korean families taught their child the services provided by ROSCA) and social capital (Korean immigrants social structure was characterized by a high level of solidarity).

The ROSCA system allowed Korean immigrants to access the American financial system but this led to the loss of feelings of solidarity in exchange for accumulation, assimilation, and individualism. After all, past experiences, showed that business success was driven by social and cultural capital.

A question arises spontaneously: It is possible to fail in business just because the entrepreneurs lack social and cultural capital, even if equipped with abundant human and financial resources? This is a complex theme because it is not easy to understand what factors related to dimensions such as education or knowledge can influence the vocational process of starting and managing a business. To respond to this question, the Authors have decided to illustrate the evolution of the business-career of Donald J. Trump, conscious that a single case does not prove a generalization.

The reason for the choice is clear, Donald J. Trump even if had a good education, experience in the real estate industry, financial and human resources provided by his father to run business activities, has not been a successful business owner. Specifically, Donald Trumps' career can be divided into four phases. The first phase (1974-1984) was characterized by numerous successes in the property industry thanks to the active support of his father. After that, between 1985-1990, he undertook huge investments from gambling to airline, by ignoring the advice from his father and financial press that suggested to avoid these expenses. By 1991, Trump failed in almost all the activities in which had bet. Finally, from 1996 to 2005, he decided to abandon the real estate property industry preferring a career in the entertainment and political world.

This happens because Trump, unlike his father (a successful businessman who emigrated from Germany), had different cultural and social sources on which built his business-idea. In fact, Donald Trump was encouraged since his childhood to grow up with a narcissistic personality, with the need to be admired and by ignoring people's opinions. Instead, his father was a self-made business-man and did not grow up in a well-off environment. Moreover, Trump, unlike his father, was not involved in the German immigrant community as well as did not join philanthropic, civic, religious or political organizations.

Therefore, comparing with his father, Donald Trump was social and cultural undercapitalized and, these lack led to his bankruptcy. However, the Authors, to deeply understand the role of social and cultural capital undercapitalization in the entrepreneur bankruptcy, suggest analysing other cases of failed entrepreneurs amply endowed with human and financial capital.

Over history, capitalism was always subjected to numerous criticisms. From the Reformation promoted by Martin Luther to social Darwinism (in the Gilded Age), the free-market was seen as immoral. However, as in the past, also Darwinism found a way to avoid capitalism's bad reputation by recognizing the entrepreneur's figure as pivotal for the development of society and wellbeing. Hence, the entrepreneur is an agent of Mother Nature, that despite his (probable) misconduct, result to be essential for social and economic progress. Based on this concept, Joseph Schumpeter elaborated the notions of "leader" and "superman" as ideal of his heroic entrepreneur. Spinning off from that approach, especially in the United States, entrepreneurs become cultural icons. From the twentieth century, thanks to the birth

of training business courses, public opinion started to recognize the figure of the entrepreneur as a real job. This public acknowledgment was spread all over the world, especially in the United States, which started to support and appreciate the activity of small business owners to the detriment of big companies. The reason why small businesses were more legitimated than big companies, is related to the process of social capital formation. In fact, local businesses were able to established quality and trustful relationships with their customers by avoiding opportunistic behaviours and the creation of this social network encourage the development of small businesses.

To date, in advanced capitalism, the most persistent entrepreneurs are those who retain strong community ties. In contrast, if lacking social capital, elite entrepreneurs rely on money. Generally, small and medium businesses strongly rely on social capital in terms of communities' ties that offer business owners essential information, guidance, additional resources, competitiveness, and legitimation. Instead, big companies are able to acquire the same advantages coming from strong social capital thanks to abundant economic and financial resources.

With this volume, the Authors highlight two models of entrepreneurship: the short model and the long model. The short model relies on the idea that money, for business owners, are the pivotal source to acquire commodities accessible in the market. Therefore, all resources are fully monetized and available for purchase on the price-making market. Conversely, the long model of business ownership, consider resources such as the entrepreneur's team social, cultural, and symbolic capital the most important for business success.

LIBRI DELLA COLLANA PICCOLA IMPRESA/SMALL BUSINESS

I. MARCHINI

*IL GOVERNO DELLA PICCOLA IMPRESA*Vol. I – Le basi delle conoscenze
150 pagine; €uro10,33

I. MARCHINI

*IL GOVERNO DELLA PICCOLA IMPRESA*Vol. III – La gestione delle funzioni
472 pagine; €uro23,24

T. PENCARELLI

PICCOLA IMPRESA, ALLEANZE STRATEGI-CHE ED INTEGRAZIONE EUROPEA 372 pagine; €uro23,24

I. FAVARETTO

MERCATI IMPERFETTI E DECENTRAMENTO PRODUTTIVO 262 pagine; €uro12,91

M. PAOLONI - P. DEMARTINI

IL BILANCIO DELLA PICCOLA IMPRESA IN EUROPA 436 pagine; €uro23,24

G. FERRERO (a cura di)

DISTRETTI, NETWORKS, RAPPORTI

INTERAZIENDALI

Contributi presentati al workshop di

Piccola Impresa/Small Busines
"I processi innovativi nelle piccola impresa",

Urbino, 21-22 maggio 1998

476 pagine; €uro23,24

M.CIOPPI - E.SAVELLI

(E-book) INFORMATION TECHNOLOGY E IMPRESE MINORI Opportunità, impatto e limiti PDF on-line € 14,00 - CD Rom €uro 19,00

I. MARCHINI

*IL GOVERNO DELLA PICCOLA IMPRESA*Vol. II – La gestione strategica
368 pagine; €uro23,24

A. BERTI

*IL FINANZIAMENTO DELLE PICCOLE E MEDIE IMPRESE*320 pagine; €uro12,91

F. MUSSO

ECONOMIE DISTRETTUALI E CANALI DI DISTRIBUZIONE ALL'ESTERO Introduzione di C. Pepe 216 pagine; €uro16,53

P.F. CENSONI - M. SARALE

LE FORME GIURIDICHE DELLA PICCOLA IMPRESA 228 pagine; €uro12,91

M. CIOPPI - E. SAVELLI

ICT e PMI

L'impatto delle nuove tecnologie sulla gestione aziendale delle Piccole Imprese 200 pagine; €uro15,00

F. CESARONI

LA FUNZIONE DI PRODUZIONE NEL-LE PICCOLE IMPRESE 295 pagine; €uro15,00

M. DEL BALDO

LA LOGISTICA NELL'ECONOMIA DELLE IMPRESE MINORI 480 pagine; €uro24,00

F.M. CESARONI

(E-book) LA FUNZIONE DI PRODUZIONE NELLE PICCOLE IMPRESE

PDF on-line € 14,00 - CD Rom €uro 19,00

Gli interessati possono rivolgersi alla Segreteria della Associazione per lo Studio della Piccola e Media Impresa (ASPI) Università degli Studi "Carlo Bo" Urbino tel. 0722 305569 fax 0722 305541 e-mail aspi@uniurb.it