

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/308438607>

# Family Business and Entrepreneurship: Competencies and Organizational Behavior

Chapter · October 2016

DOI: 10.1007/978-3-319-49604-7\_17

CITATIONS

2

READS

264

7 authors, including:



**Serena Cubico**

University of Verona

43 PUBLICATIONS 157 CITATIONS

[SEE PROFILE](#)



**Piermatteo Ardolino**

University of Verona

16 PUBLICATIONS 8 CITATIONS

[SEE PROFILE](#)



**Stefano Noventa**

University of Tuebingen

38 PUBLICATIONS 393 CITATIONS

[SEE PROFILE](#)



**Diego Bellini**

Università degli studi di Cagliari

17 PUBLICATIONS 125 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Relational and Emotion Regulatory Resilience (RERR) [View project](#)



Collaborative Innovation Networks - COINs [View project](#)

Studies on Entrepreneurship, Structural Change  
and Industrial Dynamics

Tessaleno Devezas  
João Leitão  
Askar Sarygulov *Editors*

# Industry 4.0

Entrepreneurship and Structural Change  
in the New Digital Landscape

 Springer

# **Studies on Entrepreneurship, Structural Change and Industrial Dynamics**

## **Series editors**

João Leitão

University of Beira Interior, Covilhã, Portugal

Tessaleno Devezas

University of Beira Interior, Covilhã, Portugal

The ‘Studies on Entrepreneurship, Structural Change and Industrial Dynamics’ series showcases exceptional scholarly work being developed on the still unexplored complex relationship between entrepreneurship, structural change and industrial dynamics, by addressing structural and technological determinants of the evolutionary pathway of innovative and entrepreneurial activity.

The series invites proposals based on sound research methodologies and approaches to the above topics. Volumes in the series may include research monographs and edited/contributed works. Please send the completed proposal form downloadable from this page (see “For Authors and Editors”) to the series editors.

More information about this series at <http://www.springer.com/series/15330>

Tessaleno Devezas • João Leitão •  
Askar Sarygulov  
Editors

# Industry 4.0

Entrepreneurship and Structural Change  
in the New Digital Landscape

 Springer

*Editors*

Tessaleno Devezas  
University of Beira Interior  
Covilhã, Portugal

João Leitão  
University of Beira Interior  
Covilhã, Portugal

Askar Sarygulov  
Saint-Petersburg State University of  
Architecture and Civil Engineering  
Saint Petersburg, Russia

ISSN 2511-2023                      ISSN 2511-2031 (electronic)  
Studies on Entrepreneurship, Structural Change and Industrial Dynamics  
ISBN 978-3-319-49603-0              ISBN 978-3-319-49604-7 (eBook)  
DOI 10.1007/978-3-319-49604-7

Library of Congress Control Number: 2017934476

© Springer International Publishing AG 2017

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations

Printed on acid-free paper

This Springer imprint is published by Springer Nature  
The registered company is Springer International Publishing AG  
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Acknowledgment

This book was prepared on the basis of contributions presented at the Third International Conference “Breakthrough technologies of the 21st century and their transformative power on the existing industrial structure and socioeconomic realm,” held at Peter the Great Saint-Petersburg Polytechnic University, on May 18–20, 2016, in the framework of the Russian Science Foundation Project No. 14-28-00065.

# Contents

<b>Introduction</b> . . . . .	1
Tessaleno Devezas, João Leitão, and Askar Sarygulov	
<b>Part I Structural Change and Cycles</b>	
<b>Economic Potential of Breakthrough Technologies and Its Social Consequences</b> . . . . .	13
Askar A. Akaev and Andrey I. Rudskoi	
<b>Structural and Technological Stalemate in Eurozone: If This Is the Reality, What We Can Expect?</b> . . . . .	43
Askar Akaev, Yuri Ichkitidze, and Valentin Sokolov	
<b>On the Asymmetry of Economic Cycles</b> . . . . .	65
Valentin Sokolov, Tessaleno Devezas, and Svetlana Rummyantseva	
<b>Modern Trends in Evaluation of Macroeconomic Structural Changes</b> . . . . .	93
Igor A. Yevsikov, Konstantin O. Korovin, and Askar I. Sarygulov	
<b>Distribution and Clusters of Basic Innovations</b> . . . . .	117
Michael Y. Bolotin and Tessaleno C. Devezas	
<b>Financial Instability Under Innovation Development: Reasons and Regulation Within the Model of Evolutionary Processes</b> . . . . .	137
Yuri Ichkitidze	
<b>Part II Technological Change</b>	
<b>The Challenges in the Transition from Fossil Fuel to Renewable Energy</b> . . . . .	157
Unurjargal Nyambuu and Willi Semmler	



<b>Racing to a Renewable Transition?</b> . . . . .	183
William R. Thompson and Leila Zakhirova	
<b>Metal Matrix/Nanocarbons Composites Based on Copper and Aluminum</b> . . . . .	205
Oleg V. Tolochko, Vesselin G. Michailov, and Andrey I. Rudskoi	
<b>Additive Technologies - The Basis of Digital Custom Manufacturing</b> . . .	219
Anatoly A. Popovich, Vadim Sh. Sufiarov, and Alexey V. Grigoriev	
<b>Private Astronautics and Its Role in Space Exploration</b> . . . . .	231
Alexander B. Zheleznyakov and Vadim V. Korablev	
<b>The MANBRIC-Technologies in the Forthcoming Technological Revolution</b> . . . . .	243
Leonid Grinin, Anton Grinin, and Andrey Korotayev	
<b>Global Pattern in Materials Consumption: An Empirical Study</b> . . . . .	263
Tessaleno C. Devezas, António M. Vaz, and Christopher L. Magee	
<b>Part III Entrepreneurship Development</b>	
<b>Challenges in Technology Entrepreneurship: Managing Inter-professional Conflicts in Biopharmaceutical Enterprises</b> . . . . .	295
Călin Gurău	
<b>Perception Gaps in International Corporate Entrepreneurship: The Role of Knowledge Transfer Tools</b> . . . . .	315
Mara Brumana, Lucio Cassia, Davide Gamba, and Tommaso Minola	
<b>Family Business and Entrepreneurship: Competencies and Organizational Behavior</b> . . . . .	333
Serena Cubico, Giuseppe Favretto, Piermatteo Ardolino, Stefano Noventa, Diego Bellini, Giovanna Giancesini, and João Leitão	
<b>Metrics for Innovation and Entrepreneurial Networks</b> . . . . .	349
Luís Farinha and João J. Ferreira	
<b>Determinants and Interdependence of Firm Entry, Exit and Mobility</b> . . . . .	369
Rui Baptista and Murat Karaöz	
<b>Coopetition and Co-innovation: Do Manufacturing and Service Providers Behave Differently?</b> . . . . .	397
Dina Pereira, João Leitão, and Tessaleno Devezas	

# Family Business and Entrepreneurship: Competencies and Organizational Behavior

Serena Cubico, Giuseppe Favretto, Piermatteo Ardolino, Stefano Noventa,  
Diego Bellini, Giovanna Giancesini, and João Leitão

**Abstract** Family-owned enterprises go through various stages of growth and development over time once the second and subsequent generations enter the business. They present a unique set of challenges and problems, mostly due to generational transition, role confusion, different vision of the business, qualification and skills. This quantitative study aims at increasing the understanding of which competencies are relevant to family business success and how they significantly influence both organizational behavior and family dynamics. Findings highlight the importance of family business as a unique context to study organizational behavior and confirmed how family enterprises are influenced by family culture and kinship ties.

**Keywords** Competences • Succession • Aptitude • Skills • Family Business Management

## 1 Introduction

### 1.1 Family Business in Italian Economic System

Family businesses represent the large majority of enterprises (Astrachan and Shanker 2006; Beckhard and Dyer 1983; Corbetta 1995; International Family Enterprise Research Academy [IFERA] 2003): “*in terms of contributions, and especially numbers, family businesses represent a dominant form of economic organization throughout the world*” (Chrisman et al. 2003 p. 441).

---

S. Cubico (✉) • G. Favretto

Department of Business Administration, University of Verona, Via Cantarane 24, Verona, Italy  
e-mail: [serena.cubico@univr.it](mailto:serena.cubico@univr.it)

P. Ardolino • S. Noventa • D. Bellini • G. Giancesini

Centre for Assessment, University of Verona, Via S. Francesco 22, Verona, Italy

J. Leitão

Management and Economics Department, University of Beira Interior and CEG-IST, Covilhã, Portugal

University of Lisbon, Lisbon, Portugal

© Springer International Publishing AG 2017

T. Devezas et al. (eds.), *Industry 4.0*, Studies on Entrepreneurship, Structural Change and Industrial Dynamics, DOI 10.1007/978-3-319-49604-7\_17

333

In Italy, the number of family-owned companies is a percentage of 70 % as emerged in the most recent national census of industry and services (Istat—Italian National Institute of Statistics 2013). Family businesses represent the core of the economy; capitalistic family ventures are largely represented by small companies that have family members in managerial roles (Cnel 2005; Colli 1998).

The crucial role of family in creating social and economic prosperity is confirmed in different ways (Habbershon and Pistrui 2002). The family is seen as a controlling subject in the economy and job creation (Shanker and Astrachan 1996), as a major source of start-up capital (Steiner 2001), and as the most enduring organizational type for entrepreneurial activity in a developing economy (Pistrui et al. 1997).

Other data (Olivari 2009) show that family businesses proved to be stronger than others during the economic crisis and the factors influencing success appear to be: a stable leadership, low use of financial support and sustainable growth. The same author also highlights that the low number of young and women in strategic roles represents a risk factor.

In this scenario, in order to have a working definition of family businesses, we use a traditional one: “*organizations where two or more extended family members influence the direction of the business through the exercise of kinship ties, management roles, or ownership rights*” (Tagiuri and Davis 1982, reprint 1996 p. 199). This definition allows us to reflect on the specific dynamic that characterizes the enterprise in which there are combined factors of family, ownership, management, and employment.

## 1.2 *Intergenerational Coexistence in Family Business*

“*The feeling that in recent decades the distance between the present and past and the different modes of thinking and acting of the younger generation and the elderly have increased progressively in our and other societies is shared by many observers of social reality. . .*” (Calvi 2005 p. 115). We have chosen this statement to show that contact between generations is a crucial element. Life expectancy has increased, entrepreneurs/founders remain longer at work with positions of responsibility, and following generations share most of their working lives with their parents. In family businesses, family, job, property and business converge so that family members are involved in the enterprise and share a much more intense part of life than others who work in different environments (Gersick et al. 1997).

*Family and context, family and business, tend to lose their original boundaries and become a ‘relational field’ where the family and social actors interchange* (Scabini et al. 2008 p. 23).

In the family business, people of different ages, or better yet, people of different generations of the same family live together (Davis and Tagiuri 1989). This coexistence creates the conditions for the development of specific dynamics between younger and older (Togni 2008). Juniors pass through three professional stages: inclusion, autonomy and success; seniors live those of: maturity, continuance and integrity. For both generations, life cycles are characterized by different motivations,

defences, relational dynamics, group dynamics, conflict management, time structure, conflict management and change. For the same author (p. 83) “*the challenge is to get the best out of the time of this relationship and to establish effective daily generational balance in decisions, risks, self-realization and company management*”.

### ***1.3 Entrepreneurial Competences: Variables and Models***

In our attempt to define competences, a subject that involves different disciplines, we have tried to synthesize by highlighting selected approaches that have an interesting relationship to entrepreneurial competences. The first important identification of this theme comes from White (1959) and its subsequent application by McClelland (1973, 1976); the American tradition defines competences as those personal characteristics that are related to a superior performance and motivation (this model represents the behavioural approach, starting from an observation of performance in order to highlight individual differences). After McClelland, Spencer and Spencer (1993 p. 6) identify “*motives, traits, self-concepts, attitudes or values, content knowledge, or cognitive or behavioral skills—any individual characteristic that can be measured or counted reliably and that can be shown to differentiate significantly between superior and average performers, or between effective and ineffective performers*” as competences.

Many other models are present in the literature, for example: the British tradition of a *functional approach* (a framework concerning occupational standards of competences, Mansfield and Mitchell 1996); Cheetham and Chivers’ *holistic model* (1996, 1998) with the five dimensions of cognitive, functional, personal, ethical, and meta-competencies; the *multi-dimensional approach* developed in mainland Europe (Winterton et al. 2005); the *holistic model of competences* that integrates cognitive, functional and social competences with the meta-competences at its core (Delamare-Le Deist and Winterton 2005).

This brief summary of competence models (which does not claim to be complete) allows us to use as our proposal the recommendation of European Parliament Council to foster “*key-competences for lifelong learning*” and that defines entrepreneurship as “*an individual’s ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives*” (European Parliament and Council 2006, pp. 17–18) and “*Skills [that] relate to proactive project management (involving, for example the ability to plan, organise, manage, lead and delegate, analyse, communicate, debrief, evaluate and record), effective representation and negotiation, and the ability to work both as an individual and collaboratively in teams. The ability to judge and identify one’s strengths and weaknesses, and to assess and take risks as and when warranted, is essential*” (European Commission 2007 p. 11).

This institutional position invites scholars interested in generational coexistence and transition in family businesses to study in depth the different variables that are

related to entrepreneurial competences, described as: skills, aptitudes, attitudes, motivations, relationships.

## 2 Family Business and Competence Dynamics: A Research

The composition of the board in family firms is an expression of family characteristics and objectives (Voordeckers et al. 2007; Corbetta and Salvato 2004) and “family businesses are highly dependent on a single decision-maker, the owner” (Feltham et al. 2005 p. 13). Strategic daily decision-making in small and medium sized family businesses is therefore strictly bound up with the figure of the entrepreneur (Garcia-Alvarez and Lopez-Sintas 2001) and coexistence with the new generation (junior) requires sharing spaces for decisions and roles.

With the scenarios described, it is important to define and to know the dynamic of the competences in these two generations in order to understand where and how it is possible to intervene in facilitating the crucial moment of generational transition.

### 2.1 Objectives, Instruments and Subjects

Our research main **Objectives** are:

- to describe the competences that characterize different generations (work motivations, skill levels in different organizational tasks, entrepreneurial aptitude)
- to illustrate the quality of the relationship during work and family life;
- to describe different attitudes toward the generational transition process;
- to detect links between competencies and relationship among generations in family businesses.

The research **Hypotheses** are:

*H1 Generations of the same family involved in family business present differences in entrepreneurial motivations;*

*H2 Senior and junior describe their own and other professional skills in different ways;*

*H3 Senior and junior perceive the quality of relationship in different measures;*

*H4 Entrepreneurial aptitude is present in different measures in two generations;*

*H5 Senior and junior have different attitudes toward the generational transition process;*

*H6 Competences are related to relationships between generations.*

In Table 1 a summary of variables and hypothesis.

**Table 1** Construct, variables and hypothesis of the research

Competences model	Variables	Research hypothesis
Motivations	Needs: <ul style="list-style-type: none"> <li>– Earning a daily living</li> <li>– Ensuring the future for oneself and one's family</li> <li>– Feeling a part of the community</li> <li>– Feeling appreciated and esteemed</li> <li>– Being responsible for one's own success</li> </ul>	<i>Generations of the same family involved in family business present differences in entrepreneurial motivations</i>
Skills	Own Expertise / Other Expertise: <ul style="list-style-type: none"> <li>– Personal updating of Technology and data processing</li> <li>– Innovation of products / services</li> <li>– Thinking about the future of the company</li> <li>– Appreciation of Collaborators</li> <li>– Circumventing fiscal constraints</li> <li>– Administration and Accounting Management</li> <li>– Attention to issues and safety rules</li> <li>– Cash management and investments</li> <li>– Proper use of banking services</li> <li>– Anticipation and interpretation of customer needs</li> <li>– Choosing the most profitable suppliers</li> <li>– Sales skills</li> <li>– Being competitive with competitors</li> <li>– Carving out an exclusive market</li> </ul>	<i>Senior and junior describe their own and other professional skills in different ways</i>
Quality of intergenerational relationships	Work Relationships / Family Relationships: <ul style="list-style-type: none"> <li>– Completely in harmony</li> <li>– Parallel and independent</li> <li>– Conflictual</li> </ul> Mutual Positive Comments <ul style="list-style-type: none"> <li>– Expressed</li> <li>– Received</li> </ul>	<i>Senior and junior perceive the quality of relationship in different measures</i>
Entrepreneurial aptitudes	Factors: <ul style="list-style-type: none"> <li>– Goal Orientation</li> <li>– Leadership</li> <li>– Adaptability</li> <li>– Need for Achievement</li> <li>– Need for Self-Empowerment</li> <li>– Innovation</li> <li>– Flexibility</li> <li>– Autonomy</li> </ul>	<i>Entrepreneurial aptitude is present in different measures in two generations</i>

(continued)



**Table 1** (continued)

Competences model	Variables	Research hypothesis
Attitude toward generational transition	Generational Transition: – is a problem – we are prepared	<i>Senior and junior have different attitudes toward the generational transition process</i>
	– Own Expertise/Other Expertise – Work Relationships/Family Relationships – Mutual Positive Comments	<i>Competences are related to relationships between generations</i>

The **Instruments** used are an ad hoc *Questionnaire on Generational Transition [QGT]* (Favretto et al. 2003) and the *TAI—Entrepreneurial Aptitude Test* (Cubico et al. 2010).

The *QGT*<sup>1</sup> is made up of 19 items, both in the “Senior form” and “Junior form”. The items are equal or comparable to each other so that a statistical comparison between the two figures with respect to the investigated variables under investigation can be made. The senior’s questionnaire differs only in that it also contains some items that are designed to collect data about the enterprise (those listed in the analysis of company characteristics).

The 19 items of both forms of the questionnaire can be grouped into three main areas: conception of role, skills and vision of the entrepreneur; psycho-social components of senior-junior relationship; image of generational transition.

The *TAI* “*Test di Attitudine Imprenditoriale*” (Cubico et al. 2010; Sartori et al. 2007) describes “*the potential toward creating and developing enterprise and self-employment*” with regards to eight factors (Cubico et al. 2010 p. 427–428):

- *Goal Orientation*—tendencies toward creativity and innovation, degree of determination in reaching goals, and personal perception as to overall handling of work situations;
- *Leadership*—aptitudes toward management and leadership;
- *Adaptability*—ability to perceive environmental change and adaptability;
- *Need for Achievement*—the desire for fame, success and social affirmation and respect from others;
- *Need for Self-Empowerment*—the desire to realize oneself through one’s job which, apart from any economic goals, must be enjoyable, satisfying and interesting,
- *Innovation*—curiosity for what is new;
- *Flexibility*—tendency to reorient one’s goals according to external situation;
- *Autonomy*—necessity of having one’s own independent space to make decisions and choices.

<sup>1</sup>Cronbach’s Alpha= .858

Both instruments have been applied separately to each senior and junior (in all cases there was an interviewer).

The research **Subjects** are a group of 57 northern Italian micro, small and medium sized family businesses in different sectors (commerce, tourism, food farming, electro- and metal-mechanic, transports, wood and furniture, services for companies and people).

In particular:

- 117 entrepreneurs, *fathers* and *sons*
  - 57 seniors; average age 58.51; s.d. 7.63; 81 % male
  - 60 juniors; average age 30.12; s.d. 6.45; 73 % male.

## 2.2 Results

The results are divided as follows: motivations, skills, quality of the intergenerational relationships, aptitude, attitude toward generational transition, and relationship within these variables.

**Motivations** The motivations toward the entrepreneurial job are an interesting way to understand which expectations senior and junior put into the enterprise; in Table 2 we can see that “To ensure personal and family future” is the most selected motivation in both generations (although a low level), and that juniors are more interested in the goals of success than the seniors.

The desire to be responsible for personal success characterizes the new generation, and this makes us think that it is the *sons* who feel less significant in the life of the enterprise. We accept H1 in part.

**Table 2** What needs of the entrepreneur are satisfied in the enterprise?

Needs. . .	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
Earning a daily living	1.91 .96	1.70 .79	n.s.
Ensuring the future for oneself and one’s family	1.98 .98	1.89 .96	n.s.
Feeling a part of the community	1.04 .19	1.09 .45	n.s.
Feeling appreciated and esteemed	1.11 .32	1.13 .48	n.s.
Being responsible for one’s own success	1.13 .39	<b>1.39</b> .59	<b>.009</b>

(ANOVA; N = 108; Likert Scale = 1 insufficient–5 excellent)



**Skills** It is interesting to reflect on the skills that seniors and juniors perceived themselves and others as having. The first generation is characterized by the capacity to think of the enterprise's future and to choose the best suppliers. In particular, seniors recognize, more significantly than juniors, that they possess skills for management and accounting, financial investment, and for dealing with bank and suppliers. juniors perceived themselves as being skilled in the understanding customer needs and personal updating of technology; however, it was this last area of expertise that significantly characterized the younger generation's self-definition (Table 3).

When we ask them to reflect on the skills that characterize the other generation, the seniors highlight juniors' capacities in technological and human resources task, while the juniors recognize seniors' skills in fiscal, accounting, investment and banking services (Table 4).

**Table 3** What is your skill level in each of the following areas?

Own area of skill	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
Personal updating of technology and data processing	2.22 1.16	<b>3.39</b> 1.09	<b>.000</b>
Innovation of products/services	3.54 1.09	3.44 1.00	n.s.
Thinking about the future of the company	4.09 1.15	3.76 .97	n.s.
Appreciation of collaborators	3.57 1.08	3.37 .96	n.s.
Circumventing fiscal constraints	2.07 1.21	2.02 1.16	n.s.
Administration and accounting management	<b>3.30</b> 1.11	2.85 1.19	<b>.047</b>
Attention to issues and safety rules	3.30 1.09	3.22 1.14	n.s.
Cash management and investments	<b>3.57</b> 1.13	2.61 1.05	<b>.000</b>
Proper use of banking services	<b>3.39</b> 1.12	2.65 1.07	.001
Anticipation and interpretation of customer needs	3.91 .99	3.89 1.02	n.s.
Choosing the most profitable suppliers	<b>3.85</b> .86	3.37 1.09	<b>.012</b>
Sales skills	3.80 1.16	3.44 1.18	n.s.
Being competitive with competitors	3.70 .90	3.37 .94	n.s.
Carving out an exclusive market	3.37 1.19	3.31 1.28	n.s.

(Anova; N = 108; Likert Scale = 1 insufficient–5 excellent)

**Table 4** What is the skill level of the other generation in each of the following areas?

Area of skill of other	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
Personal updating of technology and data processing	<b>4.07</b> .93	2.15 1.16	<b>.000</b>
Innovation of products/services	3.74 1.01	3.46 1.02	n.s.
Thinking about the future of the company	3.67 1.23	3.96 1.81	n.s.
Appreciation of collaborators	<b>3.78</b> 1.02	3.28 1.17	<b>.020</b>
Circumventing fiscal constraints	2.24 1.24	<b>2.80</b> 1.28	<b>.024</b>
Administration and accounting management	2.81 1.30	<b>3.46</b> 1.19	<b>.008</b>
Attention to issues and safety rules	3.48 1.19	3.26 1.17	n.s.
Cash management and investments	2.83 1.24	<b>3.61</b> 1.14	<b>.001</b>
Proper use of banking services	2.78 1.22	<b>3.43</b> 1.24	<b>.007</b>
Anticipation and interpretation of customer needs	3.83 1.01	3.81 1.17	n.s.
Choosing the most profitable suppliers	3.70 1.13	3.67 1.20	n.s.
Sales skills	3.85 1.17	3.76 1.24	n.s.
Being competitive with competitors	3.63 .99	3.65 .94	n.s.
Carving out an exclusive market	3.30 1.27	3.63 1.19	n.s.

(ANOVA; N = 108; Likert Scale = 1 insufficient–5 excellent)

If we compare Tables 3 and 4, we see that the junior tends to see in the senior a higher number of skills than in himself, and that there is agreement in the two generations regarding some specific skills.

H2 is acceptable for the large part: senior and junior describe most of their own and other professional skills in different ways.

**Quality of Intergenerational Relationships** In Tables 5 and 6, the perception of quality in the work and family relationships is described. In particular, the most positive relationship is in family life but we can see that the junior is significantly less satisfied than the senior in both environments.

The quality of intergenerational relationships is described in the comments that seniors and juniors express and perceived receiving too; in Table 7 we can see the level of low satisfaction in the new generation.

**Table 5** How do you define your work relationships?

	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
Work relationships			
Completely in harmony	<b>3.78</b> 0.92	3.39 1.10	<b>.050</b>
Parallel and independent	3.44 1.25	3.20 1.17	n.s.
Conflictual	2.19 1.20	2.28 1.17	n.s.

(ANOVA; N = 108; Likert Scale = 1 insufficient–5 excellent)

**Table 6** How do you define family relationships?

	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
Family relationships			
Completely in harmony	<b>4.15</b> .96	3.67 1.17	<b>.021</b>
Parallel and independent	3.83 1.13	3.61 1.16	n.s.
Conflictual	1.89 1.08	2.04 1.17	n.s.

(ANOVA; N = 108; Likert Scale = 1 insufficient–5 excellent)

**Table 7** How often do you express/receive positive comments?

	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
Mutual positive comments			
Expressed	<b>3.33</b> 1.10	2.83 1.14	<b>.023</b>
Received	3.09 1.10	2.67 1.17	n.s.

(ANOVA; N = 108; Likert Scale = 1 never–5 always)

**Entrepreneurial Aptitudes** The results on the eight factors of the entrepreneurial aptitude indicate slight (but not significant) differences between the two generations (Table 8).

H4 is rejected; it is encouraging to see that entrepreneurial aptitude is present in the same measure in the two generations in the family business.

**Attitude toward Generational Transition** The image of the generational transition is positive and the entrepreneurs feel to be prepared for it, but juniors are more pessimistic about the vision of the future (Table 9) and see generational transition as a significant problem, more so than for the first generations.

**Relationship with Competences** We consider it interesting to understand the links between skills, relationships, quality and image of generational transition. These bonds could lead to a better understanding of competence dynamics in the family business.

**Table 8** Factor results in senior and junior—entrepreneurial aptitude

Entrepreneurial aptitude factor	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
F1 Goal orientation	64.67 10.89	66.07 9.81	n.s
F2 Leadership	60.79 14.30	59.67 14.59	n.s
F3 Adaptability	64.49 7.44	66.78 8.29	n.s
F4 Need for achievement	58.39 15.84	57.33 13.25	n.s
F5 Need for self-empowerment	72.86 9.91	73.25 11.04	n.s
F6 Innovation	71.68 13.61	74.10 14.79	n.s
F7 Flexibility	68.04 11.28	68.50 12.26	n.s
F8 Autonomy	60.26 12.73	60.25 14.03	n.s

(ANOVA; N = 117)

**Table 9** How do you define generational transition?

Generational transition. . .	Mean s.d. SENIOR	Mean s.d. JUNIOR	p level
. . . is a problem	2.69 1.43	<b>3.33</b> 1.29	<b>.015</b>
. . . we are prepared	3.06 1.27	3.15 1.22	n.s.

(ANOVA; N = 108; Likert Scale = 1 insufficient–5 excellent)

In order to describe the skill profile synthetically, we have created<sup>2</sup> two variables and have labelled them as follows: Own Expertise and Other Expertise (respectively the score of the skills attributed to self and to others). The Own/Other Expertises present many correlations with the relationships' perceptions and image of generational transition, as in Table 10.

It is possible to synthesize the most interesting correlations ( $\rho > .300^{**}$ )

- Own Expertise is positively correlated with: work/family harmony and family parallel relationships;
- Other Expertise is positively correlated with: work/family harmony, expressed/received positive comments.

<sup>2</sup>The procedure verifies scale reliability in order to input the answer with a unique score.

**Table 10** Correlations between skills and relationships variables (Spearman's Rho; N = 108)

	1	2	3	4	5	6	7	8	9	10	11	12
1.Work harmony	–											
2.Rel. parallel in work	.264**	–										
3.Work conflict	–.568**	–.274**	–									
4.Family harmony	.666**	.246*	–.317**	–								
5.Rel. parallel in family	.274**	.517**	–.114	.445**	–							
6.Family conflict	–.569**	–.152	.553**	–.712**	–.401**	–						
7.Expressed comments	.507**	.259**	–.293**	.507**	.220*	–.344*	–					
8.Received comments	.451**	.189	–.297**	.420**	.213*	–.371**	.560**	–				
9.Generational transition: problem	–.273**	.024	.215*	–.176	–.064	.225*	–.168	–.164	–			
10.Generational transition: we are ready	.164	.150	–.151	.203*	.083	–.108	.116	.144	–.124	–		
11.Own expertise	.316**	.228*	–.101	.350**	.435**	–.229*	.223*	.233*	–.075	.165	–	
12. Other expertise	.383**	.201*	–.136	.457**	.280*	–.290**	.433**	.344**	–.219*	.130	.289**	–

These data highlight the importance of the awareness of personal and other competences in the relationships between generations (in family and work environment).

Table 11 presents finding of the Regression Model Analysis. In the work and family environments, Model 2, which includes the Others' Expertise, is more explicative of the quality in the relationship. We can underline the importance of considering the other generation's competences as an important variables in creating positive relationships between generations in the family business.

H6 is partially confirmed: competencies are related to the relationship between generations.

### 3 Discussion

We can see that some differences emerge and that the resulting data reveal that the crucial moment of generational transition can be influenced by different personal and relational variables also. The question can also be raised as to whether these differences can be an element of positive value or not.

It is important to understand the differences discerned between seniors and juniors and whether they can help the company in the future or whether they present a risk as an obstacle in generational transition, thereby inflicting damage on the company itself.

The research presented reveals that recognizing mutual competences and the different components that characterize in intergenerational coexistence is a possible way of helping the generational transition process.

The dynamics of the competences influence relationships and the subsequent possibility of having a rewarding work life.

The limits of the work is recognizable in the lack of a single definition and model for competences, however we think that this limitation will lead to the future definition of a synthetic model to include variables that appear correlated.

**Table 11** Regression model: competences on relationship variables (N = 108)

Dependent variables	Relationships			
	Harmony in Work		Harmony in Family	
	Model 1 $\beta$	Model 2 $\beta$	Model 1 $\beta$	Model 2 $\beta$
Constant	2.467	1.189	2.361	1.031
Own expertise	.171	.34	.209	.076
Other expertise		.486**		.472**
<i>Adj R<sup>2</sup></i>	.014	.223	.029	.225
<i>Model F</i>	1.969	10.485	2.974	10.600
<i>Significance</i>	.165	.000	.089	.000

(\* $p < .05$ ; \*\* $p < .01$ )

**Acknowledgment** João Leitão acknowledges Fundação para a Ciência e a Tecnologia (FCT) for support under the Sabbatical Scholarship Program (Ref.: SFRH/BSAB/127908/2016).

## References

- Astrachan, J. H., & Shanker, C. M. (2006). Family businesses' contribution to US economy: A closer look. In P. Z. Poutziouris, K. X. Smirnyos, & B. Klein (Eds.), *Handbook of research in family business* (pp. 56–64). Cheltenham: Edward Elgar Publishing.
- Beckhard, R., & Dyer Jr., W. G. (1983). Managing continuity on the family owner business. *Organizational Dynamics*, 12(1), 5–12.
- Calvi, G. (2005). Le percezioni esistenziali, un indice della distanza tra generazioni. In G. Calvi (Ed.), *Generazioni a confronto. Materiali per uno studio* (pp. 115–152). Venezia, IT: Marsilio.
- Cheetham, G., & Chivers, G. (1996). Towards a holistic model of professional competence. *Journal of European Industrial Training*, 20(5), 20–30.
- Cheetham, G., & Chivers, G. (1998). The reflective (and Competent) practitioner: A model of professional competence which seeks to harmonise the reflective practitioner and competence-based approaches. *Journal of European Industrial Training*, 22(7), 267–276.
- Chrisman, J. J., Chua, J. H., & Steier, L. P. (2003). An introduction to theory of family business. *Journal of Business Venturing*, 18(4), 441–448.
- Cnel—Consiglio nazionale dell'economia e del lavoro (2005). *Piccole Imprese: concorrenza e competitività nel mercato globale*. Roma, IT: Pronounce 76. [http://www.cnel.it/53?shadow\\_documenti=10526](http://www.cnel.it/53?shadow_documenti=10526).
- Colli, A. (1998). Networking the market: Evidence and conjectures from the history of the Italian industrial districts. *European Yearbook of Business History*, 1, 75–92.
- Corbetta, G. (1995). Patterns of development of Family businesses in Italy. *Family Business Review*, 8(4), 255–265.
- Corbetta, G., & Salvato, C. A. (2004). The board of directors in family firms: One Size Fits All? *Family Business Review*, 17(2), 119–134.
- Cubico, S., Bortolani, E., Favretto, G., & Sartori, R. (2010). Describing the Entrepreneurial Profile: The Entrepreneurial Aptitude Test (TAI). *International Journal of Entrepreneurship and Small Business*, 11(4), 424–435.
- Davis, J. A., & Tagiuri, R. (1989). The influence of life stage on Father-Son work relationships in family companies. *Family Business Review*, 2(1), 47–74.
- Delamare-Le Deist, F., & Winterton, J. (2005). What is competence? *Human Resource Development International*, 8(1), 27–46.
- European Commission (2007). Key competences for lifelong learning: European reference framework. <https://www.britishcouncil.org/sites/default/files/youth-in-action-keycomp-en.pdf>.
- European Parliament and Council. (2006). Recommendation of the European Parliament and of the Council of 18 December 2006 on Key Competences for Lifelong Learning. Official Journal of the European Union (2006/962/EC). <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010:0018:EN:PDF>.
- Favretto, G., Sartori, R., & Bortolani, E. (2003). Il passaggio generazionale nella PMI a gestione familiare. *Risorsa Uomo*, 9(3-4), 361–374.
- Feltham, T. S., Feltham, G., & Barnett, J. J. (2005). The dependence of family business on a single decision-maker. *Journal of Small Business Management*, 43(1), 1–15.
- Garcia-Alvarez, E., & Lopez-Sintas, J. (2001). A taxonomy of founders based on values: The root of family business heterogeneity. *Family Business Review*, 14(3), 209–230.
- Gersick, K. E., Davis, J. A., Hampton, M., & Lansberg, I. (1997). *Generation to generation: Life cycles of the family business*. Boston, MA: Harvard Business School Press.
- Habbershon, T. G., & Pistrui, J. (2002). Enterprising families domain: Family-influenced ownership groups in pursuit of transgenerational wealth. *Family Business Review*, 15(3), 223–237.

- IFERA—International Family Enterprise Research Academy. (2003). Family business dominate. *Family Business Review*, 16(4), 235–239.
- Istat—Italian National Institute of Statistics. (2013). *Rapporto Annuale 2013. La situazione del paese*. Roma, IT: Istat [http://www.istat.it/it/files/2013/05/Rapporto\\_annuale\\_2013.pdf](http://www.istat.it/it/files/2013/05/Rapporto_annuale_2013.pdf).
- Mansfield, B., & Mitchell, L. (1996). *Towards a competent workforce*. London, UK: Gower.
- McClelland, D. (1973). Testing for competence rather than for 'intelligence'. *American Psychologist*, 28(1), 1–14.
- McClelland, D. (1976). *A guide to job competency assessment*. Boston, MA: McBer.
- Olivari, L. (2009). Più forti di fronte alla crisi. *L'impresa*, 1, 48–51.
- Pistruì, D., Welsch, H., & Roberts, J. (1997). The [re]-emergence of family businesses in the transforming Soviet Bloc: Family contributions to entrepreneurship development in Romania. *Family Business Review*, 10(3), 221–238.
- Sartori, R., Favretto, G., & Sartori, A. (2007). Aspetti quantitativi dell'attitudine imprenditoriale. Il TAI (Test di Attitudine Imprenditoriale). In G. Favretto & R. Sartori (Eds.), *Le età dell'impresa* (pp. 101–122). Milano, IT: Franco Angeli.
- Scabini, E., Tamanza, G., & Pozzi, M. (2008). Dinamiche familiari e trasmissione generazionale nelle imprese di famiglia. In G. Trentini & M. Togni (Eds.), *Continuità generazionale d'impresa. Dimensioni psicologiche e relazionali* (pp. 19–38). Franco Angeli: Milano, IT.
- Shanker, M. C., & Astrachan, J. H. (1996). Myths and Realities: Family Business's Contributions to the US Economy. *Family Business Review*, 9(2), 107–123.
- Spencer, L., & Spencer, S. (1993). *Competence at Work: A Model for Superior Performance*. New York: Wiley.
- Steiner, L. (2001). Family Firms, plural Forms of Governance, and the Evolving Role in Trust. *Family Business Review*, 14(4), 353–368.
- Tagiuri, R., & Davis, J. A. (1982). Bivalent Attributes of the Family Firm. Cambridge, MA: Working Paper Harvard Business School [reprint (1996), *Family Business Review*, 9(2), 199–208].
- Togni, M. (2008). La relazione tra generazioni nell'impresa. Fasi e percorsi di sviluppo. In G. Trentini & M. Togni (Eds.), *Continuità generazionale d'impresa. Dimensioni psicologiche e relazionali* (pp. 83–106). Franco Angeli: Milano, IT.
- Voordeckers, W., Van Gils, A., & Van den Heuvel, J. (2007). Board composition in small and medium-sized family firms. *Journal of Small Business Management*, 45(1), 137–156.
- White, R. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 279–333.
- Winterton, J., Delamare-Le Deist, F., & Stringfellow, E. (2005). *Prototype typology of knowledge, skills and competences*. Thessaloniki, GR: CEDEFOP [http://www.cedefop.europa.eu/files/3048\\_en.pdf](http://www.cedefop.europa.eu/files/3048_en.pdf).