



## Entrepreneurial team diversity and start-up growth in consulting and hospitality

Rui Baptista, António Sérgio Ribeiro, Syeda Nimra Batool, Cheng-Feng Cheng & Sascha Kraus

**To cite this article:** Rui Baptista, António Sérgio Ribeiro, Syeda Nimra Batool, Cheng-Feng Cheng & Sascha Kraus (2024) Entrepreneurial team diversity and start-up growth in consulting and hospitality, *The Service Industries Journal*, 44:13-14, 1038-1060, DOI: [10.1080/02642069.2022.2138357](https://doi.org/10.1080/02642069.2022.2138357)

**To link to this article:** <https://doi.org/10.1080/02642069.2022.2138357>



Published online: 31 Oct 2022.



[Submit your article to this journal](#)



Article views: 397



[View related articles](#)



[View Crossmark data](#)








Citing articles: 5 [View citing articles](#)

RESEARCH ARTICLE



## Entrepreneurial team diversity and start-up growth in consulting and hospitality

### 咨询和酒店业的创业团队多元化与初创企业成长

Rui Baptista <sup>a</sup>, António Sérgio Ribeiro <sup>b</sup>, Syeda Nimra Batool <sup>a,c,\*</sup>,  
Cheng-Feng Cheng <sup>d</sup> and Sascha Kraus <sup>e,f</sup>

<sup>a</sup>CEG-IST, Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal; <sup>b</sup>CEG-IST, Instituto Superior Técnico, Universidade de Lisboa and Statistics Portugal, Lisboa, Portugal; <sup>c</sup>Department of Management, Technology and Economics, ETH Zurich, Zürich, Switzerland; <sup>d</sup>National Taichung University of Science and Technology, Taichung, Taiwan; <sup>e</sup>Faculty of Economics & Management, Free University of Bozen-Bolzano, Bolzano, Italy; <sup>f</sup>Department of Business Management, University of Johannesburg, Johannesburg, South Africa

#### ABSTRACT

This study examines how human capital diversity in entrepreneurial teams relates to new venture growth in two distinct service industries: hospitality and knowledge-based consultancy. Drawing on longitudinal linked employer-employee data from Portugal, we use large representative samples of start-ups founded and managed by entrepreneurial dyads to identify configurations of team members' human capital resources linked to high venture growth. We find that high-growth entrepreneurial dyads are strongly homogeneous in hospitality but rather more diverse in knowledge-based consulting. We propose that differences in successful entrepreneurial teams across these sectors are likely associated with industry context concerning human capital requirements and environmental uncertainty: while team homogeneity succeeds in the relatively stable environment of hospitality services, volatility in knowledge-based consulting favors greater diversity.

本研究探讨了创业团队中的人力资本多样性如何与两个不同服务行业的新风险增长相关：酒店和基于知识的咨询。利用来自葡萄牙的纵向关联的雇主-雇员数据，我们使用由企业家二元组创立和管理的初创企业的大型代表性样本来确定与高风险增长相关的团队成员的人力资本资源配置。我们发现，高增长的创业二元在酒店服务方面具有很强的同质性，但在基于知识的咨询方面则更加多样化。我们认为，这些部门成功创业团队的差异可能与人力资本要求和环境不确定性有关的行业背景有关：虽然团队同质化在相对稳定的酒店服务环境中取得成功，但基于知识的咨询的波动性有利于更大的多样性。

#### ARTICLE HISTORY

Received 5 June 2022

Accepted 15 October 2022



#### KEYWORDS

Entrepreneurial teams; human capital; diversity; knowledge-based consultancy; hospitality services

#### 关键词

创业团队; 人力资本; 多样性; 基于知识的咨询; 款待服务

\*Present address: Chair of Entrepreneurship and Innovative Business Models, Ruhr-Universität Bochum, Faculty of Management and Economics, GD 03/219, Universitätsstraße 150, 44780 Bochum

**CONTACT** Rui Baptista  [rui.baptista@tecnico.ulisboa.pt](mailto:rui.baptista@tecnico.ulisboa.pt)  CEG-IST, Instituto Superior Técnico. Av. Rovisco Pais 1, 1049-001 Lisboa, Portugal. +351 21 841 7729

## 1. Introduction

Over the last decades, the importance of entrepreneurship to economic growth and job creation has been increasingly recognized by academics and policymakers (Ferreira et al., 2019). At the same time, in most developed countries, service sectors have become the main driver of employment creation and productivity growth (Lv et al., 2021; Uppenberg & Strauss, 2010). Nevertheless, the role of entrepreneurship in the service sectors is still significantly under-researched (Kraus, 2013).

When a start-up is successful, substantial credit is often attributed to the lone genius of the lead founder. However, the vast majority of new ventures are founded and led by *teams* of founders rather than by individuals (Beckman, 2006; Kamm et al., 1990). This article thus focuses on the performance of service industry start-ups founded by teams rather than on an individual leader.

The founding team is the key resource of the new venture, providing the foundation for the start-up's strategies, resources, and products, impacting both current and future performance (Beckman & Burton, 2008; Honoré, 2022). The members of new venture teams share both leadership and responsibility for the growth of the new firm. Entrepreneurial teams create the initial policies and procedures of the company, recruit the firm's first employees, and shape the culture of the organization (Gregori & Parastuty, 2021; Klotz et al., 2014). In all these processes, team members make use of their human capital, consisting of various types of professional training and experience acquired over the course of their professional careers, as well as their formal education.

Extensive research has confirmed the impact of entrepreneurial human capital on new venture growth (see Unger et al., 2011; and Marvel et al., 2016 for reviews). According to Lim et al. (2008) and Shaw et al. (2008), human capital represents an important factor in building service performance and reputation. Entrepreneurial team dynamics is a relatively unexplored topic in services, except for software development (Bishop & Brand, 2014; Vissa & Chacar, 2009; Zimmerman, 2008). This study addresses this gap by focusing specifically on the composition of entrepreneurial founding teams in terms of the human capital profiles of their members.

In particular, we address a key question influencing the dynamics and growth of entrepreneurial teams: whether teams that are diverse in their human capital profiles are likely to achieve higher sales growth than more homogeneous teams.<sup>1</sup> The effect of diversity in team members' experiences is relatively unclear in the literature. On one hand, founders' diverse experiences should foster new venture growth because the combination of different experience-based knowledge components drives innovative decision making (Cortese et al., 2021). On the other hand, founders' shared experiences should positively relate to growth because shared knowledge and routines facilitate consensus and rapid decision making (Castellani et al., 2021; Honoré, 2022). Our study contributes to this debate by examining the growth of diverse and homogeneous teams in the context of service industries.

We examine the growth of start-ups in two markedly distinct service sectors: hospitality and knowledge-based consultancy. Hospitality industry firms focus on related services such as accommodation, and food and beverage services, where the kind of service itself is usually physical (Teng & Barrows, 2009). Knowledge-based consulting firms on the other hand provide a wide variety of high value-added services covering

management, accounting, advertising, law, as well as engineering, technology, and architecture. The contrasting nature of these two industries regarding both human resources and the external environment provides an interesting setting that can be explored to better compare and interpret our results.

Our study responds to recent calls for studies to focus on the role of entrepreneurship for tourism and hospitality firm growth (Kallmuenzer et al., 2019) as well as for knowledge-based services (Mason, 2018). Entrepreneurship plays a key role in tourism and hospitality services. In an industry where global chains coexist with family-based enterprises and local businesses exploring market niches (Chang, 2011; Lee-Ross & Lashley, 2010), entrepreneurs need to be propelled by vision and creativity as well as innovativeness and social responsibility (Bavik & Kuo, 2022; Carmichael & Morrison, 2011). In the knowledge-based services sector, large multinational companies also coexist with local, entrepreneurial small businesses. The pursuit of such targets requires greater knowledge of the characteristics of founders, in particular with regard to their formal education, professional training and a highly specialized experience (Kallmuenzer et al., 2021).

Our study takes advantage of large and unique representative samples of start-ups founded and managed by entrepreneurial dyads (i.e. teams of two members). Dyads are one of the most common forms of entrepreneurial team size (Ruef et al., 2003), and provide a meaningful way of streamlining the analysis of entrepreneurial teams (e.g. Coad & Timmermans, 2014; Harper, 2008; Watson et al., 2003). We use fuzzy set qualitative-comparative analysis (fsQCA) (Ragin, 2000, 2008) to identify configurations of team members' human capital resources that are associated with high levels of new venture growth. By employing fsQCA to examine team composition and new venture growth in these two service industries, our analysis adds a new dimension to the study of the role played by entrepreneurial team human capital and to the debate concerning whether entrepreneurial team diversity is detrimental or beneficial to new venture growth (Jin et al., 2017; Klotz et al., 2014).

## 2. Theoretical background

### 2.1. Human capital and entrepreneurial team performance

Extensive research has examined the impact of entrepreneurial human capital on new venture performance. Human capital relates to the skills and knowledge that people acquire through investments in education and on-the-job training. The literature distinguishes between general and specific human capital. General human capital relates to the skills, capabilities and knowledge acquired through education and training that are useful in several settings. Specific human capital relates to the skills, capabilities and knowledge acquired through work experience in industry-specific and/or task-specific (i.e. functional) settings (e.g. Baptista et al., 2014).

Human capital plays an important role in helping start-up founders deal with the complexity and ambiguity of entrepreneurial decisions. Studies consistently find that owners and managers with higher levels of human capital are more likely to discover opportunities and succeed in implementing them (e.g. Rauch & Rijdsdijk, 2013).

Entrepreneurial team members can combine their knowledge and experience to discover – or create – opportunities, develop products, devise strategies and acquire resources,

thus contributing to the growth and success of their start-up (e.g. Delmar & Shane, 2006; Fern et al., 2012). Most studies of human capital focus on measures gauging one or more of four components: the level of formal education; the extent of functional experiences as a manager and as an entrepreneur, and the extent of industry-specific experience (e.g. Amason et al., 2006; Beckman et al., 2007; Eisenhardt & Schoonhoven, 1990).

*Formal education* enables the acquisition of knowledge and cognitive skills that aid the collection and analysis of information (Davidsson & Honig, 2003). Education can foster imagination, creativity and innovation skills that can be mobilized to discover and/or create business opportunities (Hofmeister et al., 2022).

*Managerial experience* encourages the development of skills required to develop innovative business opportunities (Oberschachtsiek, 2012) while also promoting the accumulation of organizing and supervising skills (Baptista et al., 2012). Managers are also more likely to recognize the benefits associated with networking and the utilization of external support that can facilitate the accumulation and mobilization of crucial resources (Colombo et al., 2004).

*Entrepreneurship experience* imparts knowledge and understanding of the entrepreneurial process (Dimov, 2010). Habitual entrepreneurs can mobilize this experience to engage in information search to detect new business opportunities (Ucbasaran et al., 2008).

*Industry experience* allows individuals to accumulate specialized product, market, customer, technological, supplier, competitor, regulatory and networking knowledge of that industry (Campbell et al., 2017).

## **2.2. Entrepreneurial team dynamics and human capital: diversity vs. Homogeneity**

The dynamics of entrepreneurial teams develop through both cognitive and affective processes (Klotz et al., 2014). Human capital arguably plays a role in both. Cognition impacts three key dimensions of entrepreneurial activity: decision making, creativity and innovation, and problem-solving. Differences in cognitive processes are often associated with diversity in personal and professional backgrounds and experiences (i.e. human capital). Shin et al. (2012) define cognitive diversity as 'perceived differences in thinking styles, knowledge, skills, values, and beliefs among individual team members' (p. 197). Martins et al. (2013) refer to the origin of these differences: 'variations in knowledge, skills, and capabilities team members possess as a result of education, experience, and natural ability' (p. 97). It seems reasonable to claim that cognitive diversity in entrepreneurial teams is associated with differences in human capital amongst team members.

Affective processes also play an important role in entrepreneurial success. Affect is noted to have a profound influence on cognitive processes, motivation, passion, and individual well-being of entrepreneurs (Grégoire et al., 2015). The entrepreneurial process is filled with innumerable emotions and feelings (Baron, 2008) that influence how entrepreneurial team members interact with each other and with the external environment. Entrepreneurial decisions are often made in contexts characterized by high uncertainty, time pressure, and intense emotions (Shepherd et al., 2015). Sharing a collective passion allows team members to collaborate and help each other in addressing the increasingly complex and interdependent issues that arise when developing a new venture (Drnovsek

et al., 2009; Santos & Cardon, 2019; Zhu et al., 2022). Differences in human capital backgrounds (e.g. professional experiences and levels of formal education) might lead to differences in passion and cognition that may generate interpersonal conflict among team members, disrupting group processes and leading to dysfunctional interactions and lack of social closure and trust (Pelled, 1996).

In entrepreneurial teams formed by members with heterogeneous human capital profiles, cognitive and affective differences are more likely to lead to conflicts and poor performance. However, team diversity may have a positive impact on performance because of unique cognitive attributes that heterogeneous members bring to the team, widening the information available and facilitating its processing (Milliken & Martins, 1996).

### ***2.3. Evidence on entrepreneurial team human capital diversity and new venture performance***

Research on the impacts of diversity shows that entrepreneurial teams are predominantly homogeneous regarding gender and ethnicity (e.g. Chowdhury, 2005; Ruef et al., 2003), as new ventures are often founded by teams of friends, family members, and work colleagues sharing similar backgrounds and experiences (Aldrich & Langton, 1997). Entrepreneurial teams are, however, less homogeneous when it comes to their human capital profiles. Studies often find that new venture teams are more heterogeneous in terms of educational and occupational backgrounds than in terms of gender, ethnicity, or age (Coad & Timmermans, 2014; Hellerstedt & Aldrich, 2008; Ucbasaran et al., 2003).

Studies of entrepreneurial team performance examine human capital diversity in terms of educational and functional backgrounds (e.g. Amason et al., 2006; Beckman et al., 2007; Hmieleski & Ensley, 2007). Performance measures focus both on the start-up (survival, growth, profitability, financing) and on the team itself (member turnover and perceptions of effectiveness, viability, and satisfaction). While some studies find team diversity to have beneficial effects on performance (e.g. Beckman et al., 2007; Eisenhardt & Schoonhoven, 1990; Foo et al., 2006; Vissa & Chacar, 2009), others find negative or non-significant effects (e.g. Amason et al., 2006; Boeker & Wiltbank, 2005; Chowdhury, 2005; Steffens et al., 2012). Further analyses find evidence of moderated and non-linear effects (e.g. Coad & Timmermans, 2014; Hmieleski & Ensley, 2007; Honoré, 2022). This disparity of results suggests that the research question regarding the impact on start-up performance of diversity in entrepreneurial teams' human capital profiles has not received a conclusive answer.

### ***2.4. Entrepreneurial team diversity and environmental uncertainty***

Klotz et al. (2014) propose that the ambiguity in the relationship between entrepreneurial team human capital diversity and start-up performance is due to the fact that such relationship is context-dependent and likely to be influenced (i.e. moderated) by variables such as the industry setting where the new venture is being started. Since teams that are homogeneous and heterogeneous in terms of their human capital profiles are likely to pursue different strategies (Beckman, 2006), the relationship between diversity and performance should change according to how the entrepreneurial team matches with the environment faced by the new venture. Uncertainty regarding future industry-level growth is likely to influence entrepreneurial decisions and new venture performance (Hmieleski & Ensley,

2007). Environmental uncertainty, defined as perceived inability to accurately predict future industry or market growth (Dess & Beard, 1984; Milliken, 1987) is an important determinant of entrepreneurial decision making and performance (Freel, 2005).

As argued before, entrepreneurial teams whose members have similar human capital profiles should be able to collaborate and reach quick and unified strategic decisions, which can be advantageous for performance, particularly when environmental uncertainty is low (Baum & Wally, 2003). The ability to make quick decisions in such markets may be decisive in gaining control of resources. However, under greater environmental uncertainty, the entrepreneurial team is required to deal with unexpected problems and perform nonroutine tasks. Entrepreneurial teams whose human capital profiles are heterogeneous should be able to acquire and process a greater range of information and implement a wider range of strategies. We therefore predict that:

- (i) Under greater environmental uncertainty, more diverse entrepreneurial teams should perform better (i.e. register higher sales growth) than homogeneous teams.
- (ii) Under lower environmental uncertainty, homogeneous entrepreneurial teams should perform better (i.e. register higher sales growth) than homogeneous teams.

### 3. Empirical approach

#### 3.1. Methodology

FsQCA is an appropriate methodology to address causal complexity in which various combinations (or configurations) of variables (often referred to as 'antecedents') are associated with specific outcomes. By using fsQCA it is possible to identify different configurations of entrepreneurial team human capital resources associated with high levels of new venture growth, assessing whether these configurations represent greater homogeneity or heterogeneity of the entrepreneurial team. The use of fsQCA allows us to bypass the use of diversity indexes (e.g. Blau, 1977; Teachman, 1980), avoiding loss of information and capturing complementarities within the entrepreneurial team.

When investigating the impact of team diversity on growth, the challenge is to find a concise representation of the number of possible combinations of individual attributes. A suitable way to manage the potential high dimensionality of combinations is to focus on two-person teams, or dyads (Gooty & Yammarino, 2011). Many studies of entrepreneurial teams report average sizes between two and three members (e.g. Chowdhury, 2005; Delmar & Shane, 2006; Eisenhardt & Schoonhoven, 1990; Steffens et al., 2012; Ucbasaran et al., 2003).

#### 3.2. Data

##### 3.2.1. Population and data collection

Our study uses longitudinal data matching firms and individuals (workers and business owners) in Portugal from the Portuguese Ministry of Social Security and Employment's *Quadros de Pessoal* (QP) database in which all private firms with at least one wage-earner (including owners) are obliged to fill out a yearly questionnaire. This means that the response rate is close to 100%.

Firm information includes location, industry (five-digit ISIC codes), total sales, initial capital and type of ownership. Worker information includes gender, tenure, schooling, job assignment, wages and hours of work. The survey contains the same individual information for the business owners. Following previous work (e.g. Kallmuenzer et al., 2021), we define entrepreneurs as those registered as business owners and whose job assignment is registered as ‘top manager’<sup>2</sup> thus eliminating those who may own a share of the firm, but are not involved in running it. Data on firms and individuals are linked through unique reference numbers, so it is possible to follow the careers of individuals as they start in the labor market, change firms, or become business owners. It is also possible to follow the growth of firms from establishment to closure.

We focus on start-ups established by entrepreneurial dyads in hospitality and knowledge-based consulting services (KBC). The hospitality industry includes firms providing accommodation, food and drink services. Knowledge-based consulting firms include research and development; accounting and legal; professional and management consulting; advertising; architecture and engineering; and other technical services.<sup>3</sup>

Hospitality services play a prominent role in the Portuguese economy. In the years before the pandemic, the sector generated about 12.5% of Portuguese GDP. In 2018, tourism and hospitality services firms accounted for 444,700 jobs (9.4% of total employment). During the period covered by this study, 17.9% of all start-ups and 11.8% of all firm closures in Portugal were in this sector. Knowledge-based consulting services are characterized by human resources with high levels of formal education, providing a clear-cut contrast with hospitality, where most of the workforce do not own a college degree. KBC firms generated about 4.2% of GDP in the period before the pandemic, accounting for 4.6% of total employment in 2018. Between 2008 and 2015, 7.6% of all start-ups and 6.9% of all firm closures in Portugal were KBC firms.<sup>4</sup> The outputs of both sectors are highly exportable.

Profiles of firm founders and their firms were collected for the years 2009–2011, including measures of human capital resources of the founders as well as firm sales and sales growth. The period 2009–2011 allows us enough time to monitor growth. Before 2008, changes were made to the definitions of the business activities included in the two sectors by the OECD and Eurostat, making it difficult to match the compositions of the two ISIC sectors before and after the changes. Concerning each firm and establishment, information is collected relating to location, sector, ownership form, employment size, and sales revenues. The choice of three cohorts of start-ups over three years aims at providing sufficient variability between firm characteristics while ensuring that all firms are facing the same external environment during the period of analysis.

Firm growth was monitored for seven years after founding. A period of six or seven years is often used as reference in firm growth studies (e.g. Coad & Timmermans, 2014). In the period 2009–2011, 798 hospitality start-ups and 445 KBC new ventures were led by entrepreneurial dyads. Of the 798 hospitality start-ups, a total of 264 firms operated through the seven-year period after founding, while 182 of the initial 445 KBC start-ups were still operating after seven years. The remaining firms stopped operating (i.e. stopped reporting to the QP database).

### 3.2.2. Measures

**3.2.2.1. Dependent variable.** For surviving firms, we compute the percentage sales growth in the seven years after start-up. By measuring entrepreneur human capital resources of the members of the entrepreneurial teams in the year of founding we generate a balanced panel for 798 hospitality and 445 KBC entrepreneurial dyads. Following Kallmuenzer et al. (2021), non-surviving firms were assigned a growth rate of -100%.

**3.2.2.2. Entrepreneur human capital variables.** From the individual education data reported by employers on the QP database it is possible to compute a formal education measure (EDU) comprising four levels (from 1 – primary education to 4 – college degree or higher). Functional experience variables include managerial experience (MAN), measuring the number of years spent working in a managerial position<sup>5</sup> (regardless of sector) before start-up; and entrepreneurial experience (ENT), measuring the number of years spent as a business owner, also prior to founding. Industry experience (IND) measures the number of years working in hospitality (for hospitality founders) or KBC (for KBC founders) regardless of hierarchical position.

Table 1 presents variable definitions and descriptive statistics. As expected, KBC founders have significantly higher formal education than hospitality founders (average scores over 3.5 out of 4 mean that a significant majority has a university degree or higher). Hospitality founders have higher average entrepreneurship experience but less managerial experience, while levels of industry experience are similar across sectors. While standard deviations are high, the average levels of human capital resources are similar for the two members of the entrepreneurial dyad in both industries, suggesting that homogeneous teams are dominant.

## 4. FsQCA analysis and results

### 4.1. Analysis

The fsQCA methodology is employed to identify a set of antecedents, or causal factors (i.e. configurations of entrepreneurial team members' human capital profiles) relating to an outcome (high sales growth). The first step of the analysis is data calibration (Ragin, 2017). Calibration consists of assigning each case (i.e. each firm/entrepreneurial team) scores that represent its membership in each set of antecedents (i.e. formal education, managerial experience, entrepreneurial experience, and industry experience for each of the members of the entrepreneurial team) and the outcome set (i.e. firm sales growth). The entrepreneurial human capital measures were calibrated on a 0–1 scale to construct a 'continuous' fuzzy set for each condition. This involved applying the 'direct method' for calibration in which three qualitative anchors are specified for each condition, enabling the evaluation of the degree of membership of individual data points (Ragin, 2017).

The degree of membership identifies the extent to which each entrepreneurial team displays an attribute/antecedent (for example, entrepreneurial experience of member #1). Membership is identified based on three 'anchors': (i) the threshold for full non-membership (i.e. member #1 of the entrepreneurial team does not have prior entrepreneurial experience); (ii) the threshold for full membership (i.e. member #1 of the entrepreneurial team has prior entrepreneurial experience) and (iii) the cross over point, where ambiguity

**Table 1.** Variable definitions and descriptive statistics.

Variable	Description		Total sample				Knowledge-based Services (KBC) start-ups				Hospitality industry start-ups			
			Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max	Mean	Std Dev	Min	Max
<b>EDU</b>	Education level: 1 – primary (4-year) education; 2 – basic high school (6-year); 3- completed high school (12-year); 4 – college degree.	Entrepreneur 1	2.87	0.85	1	4	3.54	0.69	1	4	2.50	0.69	1	4
		Entrepreneur 2	2.88	0.84	1	4	3.51	0.70	1	4	2.52	0.69	1	4
<b>ENT</b>	Number of years of prior business ownership experience (i.e. both owner and top manager of a business) prior to establishing the firm	Entrepreneur 1	1.97	3.05	0	22	1.75	2.94	0	22	2.09	3.11	0	16
		Entrepreneur 2	1.95	3.04	0	18	1.87	2.97	0	15	1.99	3.07	0	18
<b>MAN</b>	Number of years of managerial experience prior to establishing the firm	Entrepreneur 1	2.73	5.08	0	40	3.21	2.98	0	20	2.47	5.92	0	81
		Entrepreneur 2	2.78	5.43	0	48	3.13	2.91	0	21	2.59	6.41	0	88
<b>IND</b>	Number of years of Hospitality / KBC industry experience prior to establishing the firm	Entrepreneur 1	1.30	2.29	0	32	1.29	2.02	0	11	1.31	2.43	0	32
		Entrepreneur 2	1.30	2.39	0	29	1.20	1.94	0	12	1.35	2.61	0	29
<b>Number of firms</b>			<b>1,243</b>				<b>445</b>				<b>798</b>			

Note: Hospitality industry includes firms providing accommodation, food and drink services. KBC industry includes firms providing research and development services; accounting and legal services; professional and management consulting services; advertising agencies; architecture and engineering services; and other technical services.

about membership (i.e. ambiguity regarding whether member #1 of the entrepreneurial team has entrepreneurial experience or not) is higher. The first qualitative anchor is technically informed by the identification of the 5th percentile for full non-membership or 'fully out' (0). The second is set by the 95th percentile for full membership or 'fully in' (1). The third is set by the 50th percentile, which is the crossover point (0.5, meaning 'neither in nor out'). Using the fsQCA software package we converted all raw data scores into fuzzy-set membership scores using these three qualitative anchors.

Once cases have been calibrated, a 'truth table' is created to represent all the possible combinations (configurations) of antecedents that are causally sufficient for the outcome high sales growth to happen. The truth table is constructed by distributing the observed cases of high sales growth among each possible unique configuration (i.e. combination of antecedents) and then assessing how consistently each configuration is associated with the outcome high sales growth (Ragin, 2008, 2017).

The goal of fsQCA is to identify the necessity and sufficiency of individual causal conditions, and how these causal conditions combine into configurations that lead to the desired outcome (Kraus et al., 2018; Kumar et al., 2022). A necessary causal condition is one that must be present for a given outcome to occur, meaning the outcome does not occur in the absence of the causal condition. A causal condition is sufficient if it can produce a given outcome by itself, meaning that if the causal condition is present, the outcome is also present. However, the presence of the outcome does not necessitate the presence of a sufficient causal condition. Hence, a causal condition is sufficient for the result if all cases exhibiting the condition also exhibit the result, but there are, in addition, cases that exhibit the result but not the condition (Schneider & Wagemann, 2012). The evaluation of causal necessity and sufficiency is based on coverage and consistency thresholds. Table 2 displays the levels of consistency and coverage for each antecedent (i.e. each team member's formal education, managerial experience, entrepreneurial experience, and industry experience). Values of consistency for each of the antecedents are not greater than a specified threshold of 0.85 (Ragin, 2017). Accordingly, no single

**Table 2.** Analysis of necessity.

Antecedent	Model 1		Model 2	
	Consistency	Coverage	Consistency	Coverage
fEDU1	0.85	0.79	0.74	0.65
~fEDU1	0.55	0.91	0.40	0.71
fENT1	0.84	0.80	0.43	0.76
~fENT1	0.58	0.93	0.72	0.66
fIND1	0.84	0.82	0.47	0.78
~fIND1	0.60	0.92	0.74	0.70
fMAN1	0.78	0.83	0.56	0.77
~fMAN1	0.65	0.87	0.67	0.71
fEDU2	0.84	0.78	0.74	0.67
~fEDU2	0.54	0.91	0.40	0.71
fENT2	0.81	0.78	0.45	0.74
~fENT2	0.57	0.93	0.71	0.67
fIND2	0.84	0.83	0.48	0.78
~fIND2	0.62	0.92	0.74	0.70
fMAN2	0.79	0.83	0.65	0.80
~fMAN2	0.63	0.87	0.66	0.77

Note: Model 1 based on data from the hospitality industry. Model 2 based on data from the KBC industry.

antecedent can be considered as a necessary condition for the outcome of high sales growth.

The truth table algorithm produces a 'consistency score'. This score indicates how consistently a particular configuration produces the desired outcome. We then differentiate the configurations of antecedents (i.e. entrepreneurial team member human capital resources) that are sufficient for high sales growth to occur from those that are not by specifying a consistency cut-off value of 0.80, and by setting the number-of-cases threshold to at least one case per configuration, following Ragin (2017).

## 4.2. Results

Following the standard form of presentation of fsQCA results, Table 3 reports the intermediate solutions relating to high sales growth for hospitality (A) and KBC (B). Black circles (●) indicate the presence of causal conditions (i.e. human capital antecedents). White circles (○) indicate the absence or negation of causal conditions. Blank cells represent 'do not care' conditions. A black circle therefore suggests that a specific human capital resource is part of a condition (i.e. configuration of human capital resources) that causes the desired output (i.e. high sales growth).

For the hospitality sector, two causal configurations are found to be sufficient for high sales growth to occur, while for the KBC sector there are five configurations of team human capital resources associated with high sales growth. Consistency values of configurations and solutions are greater than 0.92 in the hospitality industry group, while for the KBC industry all configurations and solutions identified have consistency values greater than 0.98. In addition, raw and solution coverage values exceed 0.56 for the hospitality industry, meaning that the two causal configurations account for a large proportion of high sales growth cases. In the case of the KBC industry, raw and solution coverage values exceed 0.15, meaning that the five causal configurations identified account for a much smaller share of high growth cases, reflecting a greater variety in entrepreneurial team configurations associated with high growth in this industry. Configurations A1 and A2 indicate that high levels of human capital resources from both members of the entrepreneurial dyad are often associated with high sales growth. Indeed, both configurations include high levels of formal education, industry experience, and entrepreneurship experience by both members of the entrepreneurial team, while having high managerial experience may or may not be present. Remarkably, both configurations show matching human capital profiles for the two members of the dyad i.e. entrepreneurial team homogeneity is strongly associated with high sales growth in the hospitality industry.

The KBC industry displays a greater variety of entrepreneurial human capital profiles associated with high growth. The five paths or causal configurations identified reveal that high sales growth is associated with greater diversity of human capital profiles among members of the entrepreneurial dyads. This suggests that different combinations of general and specific human capital are linked to high sales growth in knowledge-based consulting firms. Only one specific human capital resource is present in all causal configurations identified as associated with high growth: high levels of entrepreneurial experience by the first member of the entrepreneurial dyad (and, in the case of configurations B1, B2 and B5, also by the second member). The other forms of entrepreneurial human capital do

**Table 3.** Intermediate solutions relating to high sales growth.

Model	Path	Antecedent								Coverage		Consistency
		EDU1	ENT1	IND1	MAN1	EDU2	ENT2	IND2	MAN2	Raw	Unique	
Model1	A1	●	●	●	○	●	●	●	○	0.56	0.05	0.92
	A2	●	●	●	●	●	●	●	●	0.70	0.19	0.93
Solution coverage = 0.76; solution consistency = 0.92												
Model2	B1	●	●	○	●	○	●	○	○	0.09	0.01	0.99
	B2	○	●	●	○	○	●	●	○	0.09	0.01	0.98
	B3	●	●	●	●	●	○	○	○	0.10	0.01	0.98
	B4	●	●	●	○	●	○	●	●	0.11	0.01	0.98
	B5	●	●	○	●	●	●	●	●	0.10	0.01	0.98
Solution coverage = 0.15; solution consistency = 0.96												

Note: Black circles '●' indicate the presence of causal conditions (i.e. antecedents). White circles '○' indicate the absence or negation of causal conditions. The blank cells represent 'don't care' conditions. Model1 based on data from the hospitality industry. Model2 based on data from the KBC industry.

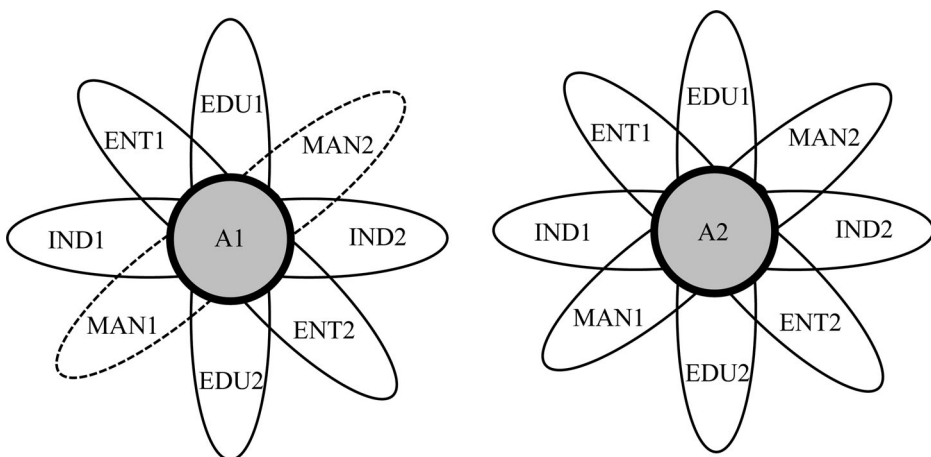
not seem to be indispensable: configuration B1 dispenses with industry experience while configuration B2 dispenses with both formal education and managerial experience. Still, all team human capital configurations associated with high sales growth in the KBC industry include either high levels of formal education or high levels of industry experience by at least one of the founding members.

## 5. Discussion

### 5.1. Entrepreneurial team human capital configurations

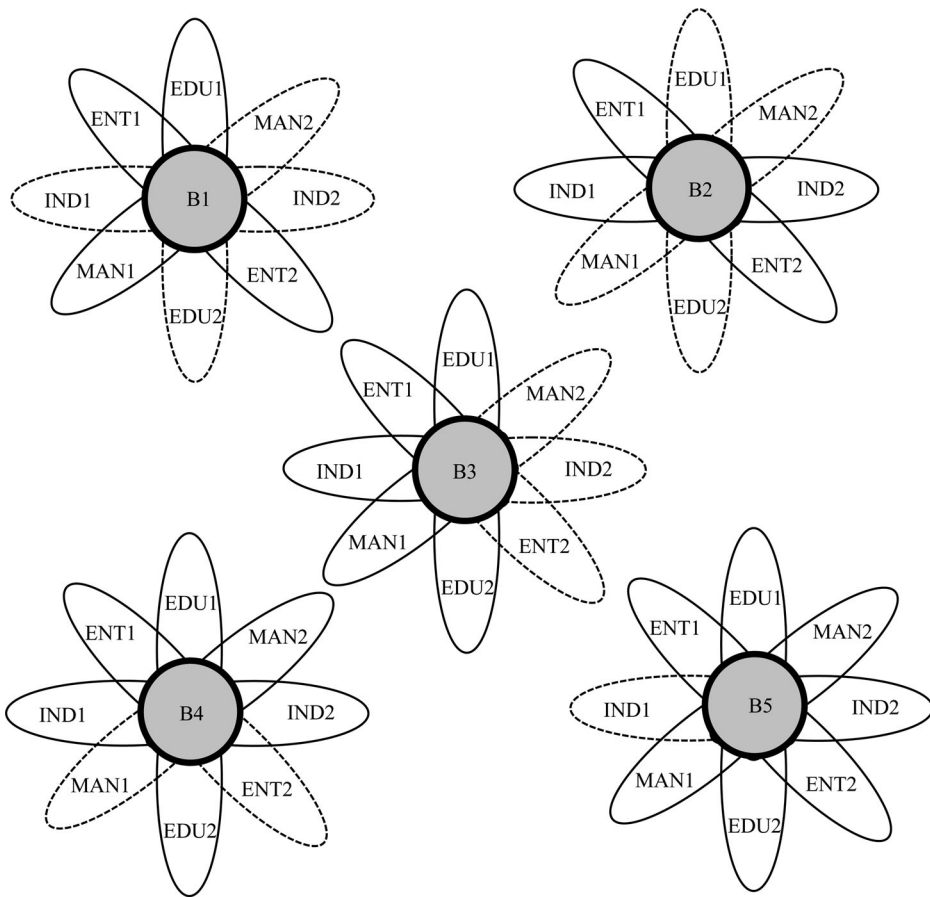
Figure 1 displays the causal configurations relating to high sales growth in the hospitality industry. To enhance interpretation, an ellipse with a black-line border represents the presence of a causal condition (i.e. a human capital resource included in the configuration), whereas an ellipse with a dotted-line border indicates the absence or negation of a condition (i.e. the resource is not included in the configuration). The hospitality firms in this study comprises firms providing accommodation, food and drink services, which are rather homogeneous activities in terms of human capital requirements. The fsQCA analysis identifies only two configurations associated with high sales growth in the hospitality industry, suggesting that successful hospitality start-ups have similar entrepreneurial human capital profiles.

Figure 2 displays the five causal configurations associated with high growth in KBC. This sector aggregates firms providing a variety of high value-added services: research and development; accounting and legal services; professional and management consulting services; advertising agencies; architecture and engineering services; and other technical services. While these services are associated with a highly educated workforce, there should be some variation in terms of complementary skills (e.g. architecture and engineering are likely associated with different complementary skills than legal services).



**Figure 1.** Causal configurations for high sales growth in hospitality industry.

Note: An ellipse with a black-line border represents the presence of the condition, whereas an ellipse with a dotted-line border represents the absence of the condition. If a condition is irrelevant to the configuration, no ellipse is displayed.



**Figure 2.** Causal configurations for high sales growth in KBC industry.

Note: An ellipse with a black-line border represents the presence of the condition, whereas an ellipse with a dotted-line border represents the absence of the condition. If a condition is irrelevant to the configuration, no ellipse is displayed.

A noteworthy result from the analysis is that, for both industries, the possession of high levels of entrepreneurial experience by at least one of the founders is indispensable for high growth. Evidence from previous studies shows that entrepreneurial experience positively affects growth (Colombo & Grilli, 2005). Prior entrepreneurial experience is of critical importance during the early years of the firm as more experienced entrepreneurs should have higher tolerance for uncertainty and greater cognitive abilities to generate and assess various alternatives in their decision making processes (Fern et al., 2012).

Another form of human capital that plays a key role is formal education. Both members of the entrepreneurial team have high levels of formal education in both human capital configurations associated with high sales growth in hospitality (A1 and A2). This result is likely associated with greater ability to raise resources. Formal education is often used by investors as a screening device, so people with higher formal education are more likely to command the resources required to set up larger and better equipped businesses (Colombo et al., 2004). For the KBC industry, the only configuration where high levels

of formal education are absent is B2, which combines high levels of entrepreneurial experience and industry experience for both members simultaneously.

### **5.2. Homogeneity vs. diversity**

Our findings regarding human capital configurations for high sales growth suggest that homogeneity plays a significant role in the formation of successful entrepreneurial dyads in hospitality. In this industry, both human capital configurations identified as associated with high sales growth entail full homogeneity of human capital attributes across both members of the entrepreneurial dyad. While in configuration A1 both founders have high levels of formal education, entrepreneurial and industry experience (but managerial experience is absent), in configuration A2 both founders display high levels of all four human capital attributes. This result suggests that homogeneity of highly qualified entrepreneurial team members is key for sales growth in hospitality start-ups.

Human capital configurations of entrepreneurial dyads associated with high sales growth in KBC are more diverse. Only one of the human capital configurations associated with high KBC sales growth involves complete homogeneity of human capital resources for both founding members: in configuration B2, high levels of entrepreneurial experience and industry experience are present for both founders while high levels of formal education and managerial experience are absent. All other configurations imply diversity. For instance, in configuration B3, one founder exhibits high levels of all four human capital attributes, while high levels of entrepreneurial, managerial, and industry experience are absent for the other. The KBC industry is significantly more heterogeneous in terms of the services performed by firms. This heterogeneity is most likely reflected on the diversity of entrepreneurial human capital profiles.

### **5.3. Team human capital diversity and environmental uncertainty**

We proposed that the relationship between team diversity/homogeneity and new venture performance is likely associated with the context in which the new venture operates. In particular, we expected that diverse entrepreneurial teams facing higher environmental uncertainty (i.e. a perceived lower capability to anticipate fluctuations in total industry sales) should perform better (i.e. register higher sales growth) than homogeneous ones. Homogeneous teams were expected to perform better when facing lower environmental uncertainty.

To assess the levels of environmental uncertainty experienced by both industries during the period under analysis, we follow Dess and Beard (1984) in looking at sales volatility. The authors suggest that turnover, absence of pattern, and unpredictability are the best measures of environmental instability. To measure uncertainty, it is important to distinguish between the rate of change and the unpredictability of change. Uncertainty should be restricted to change that is hard to predict. To capture unpredicted change, we measure volatility from the historic trend by regressing sales on a variable representing time for each individual company. Then, we divide the standard error of each regression slope coefficient by the mean value (Dess & Beard, 1984; Milliken, 1987).

Table 4 displays the measures of archival environmental uncertainty for the hospitality and KBC industries during the period under analysis. The KBC industry displays levels of

**Table 4.** Environmental uncertainty/dynamics.

Environmental uncertainty/dynamics	Hospitality	KBC
Coefficient of variation of industry sales (average of coefficients of variation for individual firms weighted by firm sales)*	0.333	0.482
Unpredicted volatility (standard error of industry sales regression on a time variable divided by the mean of the dependent variable)	0.150	0.189

Note: A t-test showed the coefficients of variation are different at the 1% confidence level ( $t = 4.7639$ ).

uncertainty that are significantly higher than those for the hospitality industry. The coefficient of variation of sales is about 44% higher for the KBC industry, while the unpredicted volatility measure is about 26% higher. The period under analysis (2009–2018) covers the effects of the great recession. Portuguese GDP declined in real terms in the years 2011–2013. While the recession had a strong impact across the Portuguese economy, those firms selling non-tradable goods – which is likely the case of most knowledge-based consulting start-ups – were affected more strongly than industries receiving a significantly large proportion of their demand from exports, as is the case of hospitality. The financial crisis of 2008–9 affected Southern Europe more strongly than Northern Europe because of substantial austerity measures. Thus, an exporting industry such as hospitality did not face unexpected sales volatility of the same magnitude as knowledge-based consulting.<sup>6</sup>

The indicators accounting for environmental uncertainty confirm the predictions set out in chapter 2.4. Team homogeneity is linked to start-up growth in more stable, less uncertain environments, while more diverse teams perform better under conditions of greater environmental instability. Members of homogeneous entrepreneurial dyads are likely to have similar cognitive structures and a shared collective passion that make collaboration and decision making easier and quicker. This seems to provide an advantage in the hospitality industry where start-ups faced relatively lower levels of environmental uncertainty during the period of analysis. In the KBC industry, the human capital configurations of high-growth entrepreneurial dyads are more diverse, suggesting that under greater environmental uncertainty the unique cognitive attributes of heterogeneous members widen the information available and facilitate its processing, leading to better decision making, despite greater chances of conflict.

## 6. Concluding remarks

### 6.1. Contribution

Our study contributes to the service industries literature by identifying the human capital profiles of entrepreneurial dyads associated with high levels of sales growth in two contrasting service sectors: hospitality and knowledge-based consultancy. In doing so, we respond to recent calls for studies to focus on growth and development of tourism/hospitality (Kallmuenzer et al., 2019) and knowledge-based services (Mason, 2018). Studying entrepreneurial team human capital configurations in service sectors adds a new dimension to the debate concerning whether entrepreneurial team diversity is detrimental or beneficial to new venture growth and performance (Jin et al., 2017; Klotz et al., 2014).

In high-growth hospitality start-ups, both founders have high levels of education, industry experience, and entrepreneurial experience. Thus, if one of the founders has

low levels of ability, these cannot be compensated by his partner's high abilities. While the human capital configurations associated with higher sales growth in KBC are more numerous, successful dyads often require high levels of education and/or entrepreneurial and industry-specific experience from both entrepreneurs.

Human capital homogeneity plays a significant role in the formation of successful entrepreneurial dyads in hospitality, while in KBC services successful entrepreneurial teams are more diverse. It is possible that these teams take advantage of a wider range of skills, abilities, and cognitive resources to react successfully to environmental uncertainty in KBC. In the hospitality industry, homogeneous entrepreneurial teams are likely to be more cohesive, sharing affective and cognitive resources, being able to take advantage of greater environmental stability. A future avenue of research could be to investigate whether these results changed during the pandemic, as hospitality faced significant environmental uncertainty during that period (Breier et al., 2021).

## 6.2. Limitations

As every research, our study has several limitations. The external validity of the causal findings presented here should be explored beyond the Portuguese context, and a recession context. Results can also be sensitive to the performance measure used. Coad and Timmermans (2014) find that heterogeneity of team composition has different effects for survival and growth. Future longitudinal studies should monitor entrepreneurial teams' human capital resource configurations with reference to a wider array of firm performance measures (e.g. survival, employment growth, profitability, reaching IPO, and internationalization). Configurations can also be examined with reference to team performance measures, such as member turnover, cohesion, and cognitive abilities.

To keep the analysis feasible and explicable without resorting to scalar measures of diversity, this study has focused on entrepreneurial dyads. Future studies should consider extending the analysis to larger entrepreneurial teams to investigate whether synergistic combinations of team members become significantly more complex and multifaceted. The same applies to extending the analysis to other observable characteristics of team members, such as age, gender, and race.

The entrepreneurial human capital variables are measured in the year the firms are established, so our analysis does not consider team turnover. During the period of analysis, 13% of entrepreneurial dyads in the hospitality sector experienced member turnover, while in the KBC sector the proportion of dyads undergoing changes was 18%. Most cases of member turnover were member exits. Research investigating changes in entrepreneurial team composition (entry and exit of team members) finds that heterogeneity increases over time (Kaiser & Müller, 2015). The effects of team turnover on performance are, however, unclear (Beckman et al., 2007; Hellerstedt & Aldrich, 2008). Our analysis does not capture whether performance gains (or losses) might have occurred due to team turnover after start-up. However, starting with Stinchcombe (1965), there is also a substantial literature establishing that organizations take on elements of their founding environment and these elements persist well beyond the founding phase (e.g. Phillips, 2002). It seems therefore reasonable to assume that, despite member turnover, the knowledge and experiences of founding teams have a lasting effect on new venture growth.

### 6.3. Implications

New venture growth attracts significant attention from policymakers and practitioners. The hospitality industry plays an important role in stimulating regional development (Komppula, 2014). Knowledge-based services play a key role in economic development, contributing significantly to technological and organizational change, supporting the growth of other industries and attracting highly skilled human resources (Peneder et al., 2003). Our findings suggest that success in both the hospitality and KBC industries requires new firm founders to invest in several forms of human capital and seek partners having high levels of education and extensive entrepreneurial and industry experience. It is also crucial for founding teams in both hospitality and knowledge-based services to acquire entrepreneurship experience.

Entrepreneurs may not recognize the importance of accumulating human capital prior to firm start-up and/or they may not have the financial resources required to obtain external support that can increase their human capital. Kallmuenzer et al. (2021) assert that there is a potential case for policymakers and practitioners to address the attitudinal and resource barriers relating to combinations of human capital resources. There seems to be a case for initiatives to link experienced entrepreneurs together in entrepreneurial teams to facilitate the accumulation of human capital resources required for firm development. Such schemes should also seek to link less experienced potential entrepreneurs with experienced habitual entrepreneurs.

There are also implications for entrepreneurship researchers. More studies using qualitative comparative analysis to examine entrepreneurial teams are warranted. FsQCA can be used to examine how entrepreneurial teams combine the cognitive abilities of their members to increase growth. Studies may look at combinations of entrepreneurial team members and key employees and/or venture capitalists to investigate how different configurations may lead to new venture growth.

### Notes

1. Our study assesses performance based on sales growth rather than survival, as many start-ups may survive in for a long time while experiencing minor growth, contributing little to economic development (Mogos et al., 2021).
2. QP micro-data discriminates the hierarchy in the firm according to the International Standard Classification of Occupations (ISCO) of the International Labor Union (see: <https://www.ilo.org/public/english/bureau/stat/isco/>).
3. Our definition of 'knowledge-based consulting services' corresponds to the definition of Other Business Services adopted by the OECD, Eurostat, IMF, and WTO: research and development services, professional and management consulting services and technical, trade-related and other business services (United Nations, 2011; see also Eurostat, 2008).
4. Data on the hospitality and knowledge-based consulting sectors was obtained from Statistics Portugal. (<https://www.ine.pt/>).
5. According to the International Standard Classification of Occupations (ISCO) reported by firms in QP.
6. Between 2009 and 2013 Portuguese GDP decreased by about 7.9% while hospitality exports increased by about 15.8%. (Source: Statistics Portugal, <https://www.ine.pt/>).

## Acknowledgements

We thank Jolanda Hessels, Miguel Torres Preto and João Leitão for comments on earlier versions of this paper. We are indebted to the Portuguese Ministry of Labor and Social Solidarity and to Statistics Portugal for allowing us access to the data used in this paper.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

Rui Baptista and António Sérgio Ribeiro gratefully acknowledge support from Fundação para a Ciência e a Tecnologia (FCT) through grant PDTC/EGE-OGE/31152/2017.

## ORCID

Rui Baptista  <http://orcid.org/0000-0003-3346-4103>

António Sérgio Ribeiro  <http://orcid.org/0000-0002-8894-2742>

Syeda Nimra Batool  <http://orcid.org/0000-0002-2968-5061>

Cheng-Feng Cheng  <http://orcid.org/0000-0001-5726-3598>

Sascha Kraus  <http://orcid.org/0000-0003-4886-7482>

## References

- Aldrich, H., & Langton, N. (1997). Human resource management practices and organizational life cycles. In *Frontiers of entrepreneurship research* (pp. 349–357). Babson College Centre for Entrepreneurship.
- Amason, A. C., Shrader, R. C., & Tompson, G. H. (2006). Newness and novelty: Relating top management team composition to new venture performance. *Journal of Business Venturing*, 21(1), 125–148. <https://doi.org/10.1016/j.jbusvent.2005.04.008>
- Baptista, R., Karaöz, M., & Mendonça, J. (2014). The impact of human capital on the early success of necessity versus opportunity-based entrepreneurs. *Small Business Economics*, 42(4), 831–847. <https://doi.org/10.1007/s11187-013-9502-z>
- Baptista, R., Lima, F., & Preto, M. T. (2012). How former business owners fare in the labor market? Job assignment and earnings. *European Economic Review*, 56(2), 263–276. <https://doi.org/10.1016/j.eurocorev.2011.08.004>
- Baron, R. A. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review*, 33(2), 328–340. <https://doi.org/10.5465/amr.2008.31193166>
- Baum, J. R., & Wally, S. (2003). Strategic decision speed and firm performance. *Strategic Management Journal*, 24(11), 1107–1129. <https://doi.org/10.1002/smj.343>
- Bavik, A., & Kuo, C. F. (2022). A systematic review of creativity in tourism and hospitality. *The Service Industries Journal*, 42(5-6), 321–359. <https://doi.org/10.1080/02642069.2022.2041605>
- Beckman, C. M. (2006). The influence of founding team company affiliations on firm behavior. *Academy of Management Journal*, 49(4), 741–758. <https://doi.org/10.5465/amj.2006.22083030>
- Beckman, C. M., & Burton, M. D. (2008). Founding the future: Path dependence in the evolution of top management teams from founding to IPO. *Organization Science*, 19(1), 3–24. <https://doi.org/10.1287/orsc.1070.0311>
- Beckman, C. M., Burton, M. D., & O'Reilly, C. (2007). Early teams: The impact of team demography on VC financing and going public. *Journal of Business Venturing*, 22(2), 147–173. <https://doi.org/10.1016/j.jbusvent.2006.02.001>

- Bishop, P., & Brand, S. (2014). Human capital, diversity, and new firm formation. *The Service Industries Journal*, 34(7), 567–583. <https://doi.org/10.1080/02642069.2014.886193>
- Blau, P. (1977). *Inequality and heterogeneity: A primitive theory of social structure*. The Free Press.
- Boeker, W., & Wiltbank, R. (2005). New venture evolution and managerial capabilities. *Organization Science*, 16(2), 123–133. <https://doi.org/10.1287/orsc.1050.0115>
- Breier, M., Kallmuenzer, A., Clauss, T., Gast, J., Kraus, S., & Tiberius, V. (2021). The role of business model innovation in the hospitality industry during the COVID-19 crisis. *International Journal of Hospitality Management*, 92, 102723. <https://doi.org/10.1016/j.ijhm.2020.102723>
- Campbell, B. A., Kryscynski, D., & Olson, D. M. (2017). Bridging strategic human capital and employee entrepreneurship research: A labor market frictions approach. *Strategic Entrepreneurship Journal*, 11(3), 344–356. <https://doi.org/10.1002/sej.1264>
- Carmichael, B. A., & Morrison, A. (2011). *Tourism entrepreneurship research*. Taylor & Francis.
- Castellani, P., Rossato, C., Giaretta, E., & Davide, R. (2021). Tacit knowledge sharing in knowledge-intensive firms: The perceptions of team members and team leaders. *Review of Managerial Science*, 15(1), 125–155. <https://doi.org/10.1007/s11846-019-00368-x>
- Chang, J. (2011). Introduction: Entrepreneurship in tourism and hospitality: The role of SMEs. *Asia Pacific Journal of Tourism Research*, 16(5), 467–469. <https://doi.org/10.1080/10941665.2011.597572>
- Chowdhury, S. (2005). Demographic diversity for building an effective entrepreneurial team: Is it important? *Journal of Business Venturing*, 20(6), 727–746. <https://doi.org/10.1016/j.jbusvent.2004.07.001>
- Coad, A., & Timmermans, B. (2014). Two's company: Composition, structure and performance of entrepreneurial pairs. *European Management Review*, 11(2), 117–138. <https://doi.org/10.1111/emre.12030>
- Colombo, M. G., Delmastro, M., & Grilli, L. (2004). Entrepreneurs' human capital and the start-up size of new technology-based firms. *International Journal of Industrial Organization*, 22(8-9), 1183–1211. <https://doi.org/10.1016/j.ijindorg.2004.06.006>
- Colombo, M. G., & Grilli, L. (2005). Founders' human capital and the growth of new technology-based firms: A competence-based view. *Research Policy*, 34(6), 795–816. <https://doi.org/10.1016/j.respol.2005.03.010>
- Cortese, D., Giacosa, E., & Cantino, V. (2021). Knowledge sharing for coepetition in tourist destinations: The difficult path to the network. *Review of Managerial Science*, 15(2), 275–286. <https://doi.org/10.1007/s11846-018-0322-z>
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331. [https://doi.org/10.1016/S0883-9026\(02\)00097-6](https://doi.org/10.1016/S0883-9026(02)00097-6)
- Delmar, F., & Shane, S. (2006). Does experience matter? The effect of founding team experience on the survival and sales of newly founded ventures. *Strategic Organization*, 4(3), 215–247. <https://doi.org/10.1177/1476127006066596>
- Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, 29, 52–73. <https://doi.org/10.2307/2393080>
- Dimov, D. (2010). Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning. *Journal of Management Studies*, 47(6), 1123–1153. <https://doi.org/10.1111/j.1467-6486.2009.00874.x>
- Drnovsek, M., Cardon, M. S., & Murnieks, C. Y. (2009). Collective passion in entrepreneurial teams. In Alan L. Carsrud & Malin Brännback (Eds.), *Understanding the entrepreneurial mind* (pp. 191–215). Springer.
- Eisenhardt, K. M., & Schoonhoven, C. B. (1990). Organizational growth: Linking founding team, strategy, environment, and growth among US semiconductor ventures, 1978–1988. *Administrative Science Quarterly*, 35, 504–529. <https://doi.org/10.2307/2393315>
- Eurostat. (2008). NACE Rev. 2: Statistical classification of economic activities in the European Community. Eurostat Methodologies and Working Papers. <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF>

- Fern, M. J., Cardinal, L. B., & O'Neill, H. M. (2012). The genesis of strategy in new ventures: Escaping the constraints of founder and team knowledge. *Strategic Management Journal*, 33(4), 427–447. <https://doi.org/10.1002/smj.1944>
- Ferreira, J. J., Fernandes, C. I., & Kraus, S. (2019). Entrepreneurship research: Mapping intellectual structures and research trends. *Review of Managerial Science*, 13(1), 181–205. <https://doi.org/10.1007/s11846-017-0242-3>
- Foo, M. D., Sin, H. P., & Yiong, L. P. (2006). Effects of team inputs and intrateam processes on perceptions of team viability and member satisfaction in nascent ventures. *Strategic Management Journal*, 27(4), 389–399. <https://doi.org/10.1002/smj.514>
- Freel, M. S. (2005). Perceived environmental uncertainty and innovation in small firms. *Small Business Economics*, 25(1), 49–64. <http://www.jstor.org/stable/40229382>
- Gooty, J., & Yammarino, F. J. (2011). Dyads in organizational research: Conceptual issues and multi-level analyses. *Organizational Research Methods*, 14(3), 456–483. <https://doi.org/10.1177/1094428109358271>
- Grégoire, D. A., Cornelissen, J., Dimov, D., & Van Burg, E. (2015). The mind in the middle: Taking stock of affect and cognition research in entrepreneurship. *International Journal of Management Reviews*, 17(2), 125–142. <https://doi.org/10.1111/ijmr.12060>
- Harper, D. A. (2008). Towards a theory of entrepreneurial teams. *Journal of Business Venturing*, 23(6), 613–626. <https://doi.org/10.1016/j.jbusvent.2008.01.002>
- Hellerstedt, K., & Aldrich, H. E. (2008). The impact of initial team composition and performance on team dynamics and survival. In *Academy of management proceedings* (Vol. 2008, No. 1, pp. 1–6). Academy of Management.
- Hmieleski, K. M., & Ensley, M. D. (2007). A contextual examination of new venture performance: Entrepreneur leadership behavior, top management team heterogeneity, and environmental dynamism. *Journal of Organizational Behavior*, 28(7), 865–889. <https://doi.org/10.1002/job.479>
- Hofmeister, J., Schneider, M. H., Kanbach, D. K., & Kraus, S. (2022). Combining strategies for high service productivity with successful service innovation. *The Service Industries Journal*, 42(11–12), 948–971. <https://doi.org/10.1080/02642069.2022.2098952>
- Honoré, F. (2022). Joining forces: How can founding members' prior experience variety and shared experience increase start-up survival? *Academy of Management Journal*, 65(1), 248–272. <https://doi.org/10.5465/amj.2018.1386>
- Jin, L., Madison, K., Krafczy, N. D., Kellermanns, F. W., Crook, T. R., & Xi, J. (2017). Entrepreneurial team composition characteristics and new venture performance: A meta-analysis. *Entrepreneurship Theory and Practice*, 41(5), 743–771. <https://doi.org/10.1111/etap.12232>
- Kaiser, U., & Müller, B. (2015). Skill heterogeneity in start-ups and its development over time. *Small Business Economics*, 45(4), 787–804. <https://doi.org/10.1007/s11187-015-9667-8>
- Kallmuenzer, A., Baptista, R., Kraus, S., Ribeiro, A. S., Cheng, C.-F., & Westhead, P. (2021). Entrepreneurs' human capital resources and tourism firm sales growth: A fuzzy-set qualitative comparative analysis. *Tourism Management Perspectives*, 38, 100801. <https://doi.org/10.1016/j.tmp.2021.100801>
- Kallmuenzer, A., Kraus, S., Peters, M., Steiner, J., & Cheng, C. F. (2019). Entrepreneurship in tourism firms: A mixed-methods analysis of performance driver configurations. *Tourism Management*, 74, 319–330. <https://doi.org/10.1016/j.tourman.2019.04.002>
- Kamm, J. B., Shuman, J. C., Seeger, J. A., & Nurick, A. J. (1990). Entrepreneurial teams in new venture creation: A research agenda. *Entrepreneurship Theory and Practice*, 14(4), 7–17. <https://doi.org/10.1177/104225879001400403>
- Klotz, A. C., Hmieleski, K. M., Bradley, B. H., & Busenitz, L. W. (2014). New venture teams: A review of the literature and roadmap for future research. *Journal of Management*, 40(1), 226–255. <https://doi.org/10.1177/0149206313493325>
- Komppula, R. (2014). The role of individual entrepreneurs in the development of competitiveness for a rural hospitality destination—a case study. *Hospitality Management*, 40, 361–371. <https://doi.org/10.1016/j.tourman.2013.07.007>
- Kraus, S. (2013). The role of entrepreneurial orientation in service firms: Empirical evidence from Austria. *The Service Industries Journal*, 33(5), 427–444. <https://doi.org/10.1080/02642069.2011.622373>

- Kraus, S., Ribeiro-Soriano, D., & Schüssler, M. (2018). Fuzzy-set qualitative comparative analysis (fsQCA) in entrepreneurship and innovation research—the rise of a method. *International Entrepreneurship and Management Journal*, 14(1), 15–33. <https://doi.org/10.1007/s11365-017-0461-8>
- Kumar, S., Sahoo, S., Lim, W. M., Kraus, S., & Bamel, U. (2022). Fuzzy-set qualitative comparative analysis (fsQCA) in business and management research: A contemporary overview. *Technological Forecasting and Social Change*, 178, 121599. <https://doi.org/10.1016/j.techfore.2022.121599>
- Lee-Ross, D., & Lashley, C. (2010). *Entrepreneurship and small business management in the hospitality industry*. Routledge.
- Lim, S., Ribeiro, D., & Lee, S. M. (2008). Factors affecting the performance of entrepreneurial service firms. *The Service Industries Journal*, 28(7), 1003–1013. <https://doi.org/10.1080/02642060701867263>
- Lv, Z., Rodríguez-García, M., & Sendra-García, J. (2021). Does institutional quality affect the level of entrepreneurial success differently across the entrepreneurship distribution? *Review of Managerial Science*, 15(4), 937–955. <https://doi.org/10.1007/s11846-020-00383-3>
- Martins, L. L., Schilpzand, M. C., Kirkman, B. L., Ivanaj, S., & Ivanaj, V. (2013). A contingency view of the effects of cognitive diversity on team performance: The moderating roles of team psychological safety and relationship conflict. *Small Group Research*, 44(2), 96–126. <https://doi.org/10.1177/1046496412466921>
- Marvel, M. R., Davis, J. L., & Sproul, C. R. (2016). Human capital and entrepreneurship research: A critical review and future directions. *Entrepreneurship Theory and Practice*, 40(3), 599–626. <https://doi.org/10.1111/etap.12136>
- Mason, J. (2018). Entrepreneurship in knowledge-based services: Opportunity and challenges for new venture, economic, and workforce development. *Journal of Business Venturing Insights*, 10, e00092. <https://doi.org/10.1016/j.jbvi.2018.e00092>
- Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. *The Academy of Management Review*, 12(1), 133–143. <https://doi.org/10.2307/257999>
- Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *The Academy of Management Review*, 21(2), 402–433. <https://doi.org/10.2307/258667>
- Mogos, S., Davis, A., & Baptista, R. (2021). High and sustainable growth: Persistence, volatility, and survival of high growth firms. *Eurasian Business Review*, 11(1), 135–161. <https://doi.org/10.1007/s40821-020-00161-x>
- Oberschachtsiek, D. (2012). The experience of the founder and self-employment duration: A comparative advantage approach. *Small Business Economics*, 39(1), 1–17. <https://doi.org/10.1007/s11187-010-9288-1>
- Pelled, L. H. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science*, 7(6), 615–631. <https://doi.org/10.1287/orsc.7.6.615>
- Peneder, M., Kaniovski, S., & Dachs, B. (2003). What follows tertiarization? Structural change and the role of knowledge-based services. *The Service Industries Journal*, 23(2), 47–66. <https://doi.org/10.1080/02642060412331300882>
- Phillips, D. J. (2002). A genealogical approach to organizational life chances: The parent-progeny transfer among Silicon Valley law firms, 1946–1996. *Administrative Science Quarterly*, 47(3), 474–506. <https://doi.org/10.2307/3094848>
- Ragin, C. C. (2000). *Fuzzy-set social science*. University of Chicago Press.
- Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. University of Chicago Press.
- Ragin, C. C. (2017). User's guide to fuzzy-set/qualitative comparative analysis. [www.fsqca.com](http://www.fsqca.com)
- Rauch, A., & Rijsdijk, S. A. (2013). The effects of general and specific human capital on long-term growth and failure of newly founded businesses. *Entrepreneurship Theory and Practice*, 37(4), 923–941. <https://doi.org/10.1111/j.1540-6520.2011.00487.x>
- Ruef, M., Aldrich, H. E., & Carter, N. M. (2003). The structure of founding teams: Homophily, strong ties, and isolation among US entrepreneurs. *American Sociological Review*, 68, 195–222. <https://doi.org/10.2307/1519766>

- Santos, S. C., & Cardon, M. S. (2019). What's love got to do with it? Team entrepreneurial passion and performance in new venture teams. *Entrepreneurship Theory and Practice*, 43(3), 475–504. <https://doi.org/10.1177/1042258718812185>
- Schneider, C. Q., & Wagemann, C. (2012). *Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis*. Cambridge University Press.
- Shaw, E., Lam, W., & Carter, S. (2008). The role of entrepreneurial capital in building service reputation. *The Service Industries Journal*, 28(7), 899–917. <https://doi.org/10.1080/02642060701846820>
- 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. <https://doi.org/10.1177/0149206314541153>
- Shin, S. J., Kim, T. Y., Lee, J. Y., & Bian, L. (2012). Cognitive team diversity and individual team member creativity: A cross-level interaction. *Academy of Management Journal*, 55(1), 197–212. <https://doi.org/10.5465/amj.2010.0270>
- Steffens, P., Terjesen, S., & Davidsson, P. (2012). Birds of a feather get lost together: New venture team composition and performance. *Small Business Economics*, 39(3), 727–743. <https://doi.org/10.1007/s11187-011-9358-z>
- Stinchcombe, A. L. (1965). *Social structure and organizations*. Rand-McNally.
- Teachman, J. D. (1980). Analysis of population diversity: Measures of qualitative variation. *Sociological Methods & Research*, 8(3), 341–362. <https://doi.org/10.1177/004912418000800305>
- Teng, C. C., & Barrows, C. W. (2009). Service orientation: Antecedents, outcomes, and implications for hospitality research and practice. *The Service Industries Journal*, 29(10), 1413–1435. <https://doi.org/10.1080/02642060903026247>
- Ucbasaran, D., Lockett, A., Wright, M., & Westhead, P. (2003). Entrepreneurial founder teams: Factors associated with member entry and exit. *Entrepreneurship Theory and Practice*, 28(2), 107–128. <https://doi.org/10.1046/j.1540-6520.2003.00034.x>
- Ucbasaran, D., Westhead, P., & Wright, M. (2008). Opportunity identification and pursuit: Does an entrepreneur's human capital matter? *Small Business Economics*, 30(2), 153–173. <https://doi.org/10.1007/s11187-006-9020-3>
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341–358. <https://doi.org/10.1016/j.jbusvent.2009.09.004>
- United Nations. (2011). Manual on statistics of international trade in services 2010 (MSITS 2010). Department of Economic and Social Affairs, Statistics Division. <https://unstats.un.org/unsd/tradeserv/TFSITS/manual.htm>
- Uppenberg, K., & Strauss, H. (2010). *Innovation and productivity growth in the EU services sector*. European Investment Bank.
- Vissa, B., & Chacar, A. S. (2009). Leveraging ties: The contingent value of entrepreneurial teams' external advice networks on Indian software venture performance. *Strategic Management Journal*, 30(11), 1179–1191. <https://doi.org/10.1002/smj.785>
- Watson, W., Stewart, W. H., Jr., & BarNir, A. (2003). The effects of human capital, organizational demography, and interpersonal processes on venture partner perceptions of firm profit and growth. *Journal of Business Venturing*, 18(2), 145–164. [https://doi.org/10.1016/S0883-9026\(01\)00082-9](https://doi.org/10.1016/S0883-9026(01)00082-9)
- Zhu, X., Yang, S., & Kromidha, E. (2022). The emergence of team entrepreneurial passion from team helping: An affective events theory perspective. *International Small Business Journal*, <https://doi.org/10.1177/02662426221089499>.
- Zimmerman, M. A. (2008). The influence of top management team heterogeneity on the capital raised through an initial public offering. *Entrepreneurship Theory and Practice*, 32(3), 391–414. <https://doi.org/10.1111/j.1540-6520.2008.00233.x>