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Systematic literature review about key factors in the identification of business opportunities

Revisión sistemática de literatura sobre factores clave en la identificación de oportunidades de negocio

Mg. Harold Gamero is a professor at Universidad Católica San Pablo, Perú, and teaches Research in Administration Sciences at Universidad Esan. (h.gamero@outlook.com) (orcid.org/0000-0001-8614-3966)

Dr. Jhony Ostos is a professor at Universidad Esan, and has a PhD in Management Science from Ramon Llull University - ES-ADE, Spain. (jostos@esan.edu.pe) (orcid.org/0000-0003-1888-7378)

Abstract

The identification of business opportunities is a determining task within the dynamics of entrepreneurship. Therefore, different researches have sought relationships between individual factors and the successful results of this first entrepreneurial step. Although numerous factors have been analyzed, there is still a considerable extension of definitions that vary between them. In response to this need, this article develops a systematic review of the literature, consolidating those factors that have been included in this research field during the last ten years. This review was carried out following the Jennifer Platt three-stage methodology, which has been widely used in similar articles. Starting from a total of 3119 articles, a systematic depuration was carried out resulting in an analysis of 30 articles. The results of this study indicate that there are about 22 proposed factors, with five being the most important among them, that facilitate the identification of business opportunities: prior knowledge, entrepreneurial alertness, self-efficacy, creativity, and contact networks. Other factors found in the analysis are: entrepreneurship experience, work experience, education, cognitive abilities, entrepreneurship intentions and the active search for opportunities in the market. This work contributes to the literature by summarizing the factors included in multiple investigations and offering future lines of research for academics interested in the area.

Resumen

La identificación de oportunidades de negocio es una tarea determinante dentro de la dinámica del emprendimiento. Por ello, diferentes investigaciones han buscado relaciones entre los factores individuales y los resultados exitosos de este primer paso emprendedor. Aunque numerosos factores han sido analizados existe todavía una extensión considerable de definiciones que varían entre ellos. Atendiendo a esta necesidad, este artículo desarrolla una revisión sistemática de la literatura, consolidando aquellos factores que han sido incluidos en investigaciones de este campo durante los últimos diez años. Esta revisión se llevó a cabo siguiendo la metodología trietápica de Jennifer Platt, la cual ha sido ampliamente utilizada en artículos similares. Partiendo de un total de 3119 artículos, se hizo una depuración sistemática teniendo como resultado final un análisis de 30 artículos. Los resultados de este estudio indican que existen alrededor de 22 factores propuestos, siendo cinco los factores más importantes que facilitan la identificación de oportunidades de negocio: el conocimiento previo, el estado de alerta emprendedor, la autoeficacia, la creatividad, y las redes de contacto. Otros factores encontrados en el análisis son: la experiencia en emprendimiento, la experiencia laboral, la educación, las capacidades cognitivas, las intenciones de emprendimiento y la búsqueda activa de oportunidades en el mercado. Este trabajo contribuye a la literatura resumiendo los factores incluidos en múltiples investigaciones y ofreciendo líneas futuras de investigación para académicos interesados en el área.

Keywords | palabras clave

Entrepreneurship, opportunity identification, prior knowledge, entrepreneurship experience, entrepreneurial alertness, self-efficacy, creativity, social networks.

Emprendimiento, identificación de oportunidades, conocimiento previo, experiencia de emprendimiento, estado de alerta emprendedor, autoeficacia, creatividad, redes de contacto.

Suggested citation: Gamero, H., and Ostos, J. (2020). Systematic literature review about key factors in the identification of business opportunities. *Retos Revista de Ciencias de la Administración y Economía, 10*(20), pp. 293-312. https://doi.org/10.17163/ret.n20.2020.07

1. Introduction

Business opportunities are the core of the entrepreneurship process. From initial theories, such as Schumpeter's (1934), to existing entrepreneurship models, such as those posed by Venkataraman (1997), Shane and Venkataraman (2000) or Eckhardt and Shane (2003), these opportunities are defined as circumstances that favor entrepreneurship activities (George et al., 2016). More formally, business opportunities are situations in which new products, services, raw materials or organizational methods can be introduced to a market and sold at a price higher than production costs (Shane & Venkataraman, 2000). However, entrepreneurs are not just traders who buy and sell resources at different times and at different values, but individuals able to recombine the resources available (Shane, 2012). In this way, the venture posed by Shane and Venkataraman (2000) is a three-stage process that consists in the identification, evaluation and exploitation of business opportunities.

One of the questions with more interest for researchers is why some people are able to identify business opportunities while others are not (Baron, 2006), which focuses on the first step of this entrepreneurial process. Several studies agree that there are cognitive, psychology and emotional differences between entrepreneurs, which condition and moderate a person's ability to recognize profitable business opportunities (Gartner et al., 2008). Based on these claims, other research has focused on identifying and studying the factors that enhance the identification of opportunities (Grégoire et al., 2011), however, these research makes it necessary to analyze the variety of concepts included in them.

This article aims to develop a systematic review of the literature on individual factors relevant to the identification of business opportunities. For Webster and Watson (2011) systematic reviews are high-value inputs that create a solid basis for the development of later knowledge: they facilitate the development of theories, it helps to get a conclusion in communication areas with excessive and unnecessary content or, on the contrary, discover areas where further research is needed.

This article is organized as follows. First, it details the methodology used for the search, selection and analysis of relevant publications which are included in the literature review. Second, individual competency-ranked factors are listed and explained. The last two sections summarize the most important findings obtained in this study and suggest future research based on the knowledge gaps found.

2. Methodology for the revision of the literature

The parameters used for this review have been obtained from practices used in previous similar analyses, such as the systematic reviews of Fayezi et al. (2017), Hmieleski and Powell (2017), George et al. (2016) and Mitchelmore and Rowley (2013); the meta-analyses developed by Bae et al. (2014), Martin et al. (2013) and Miao et al. (2017); and the recommendations made by Sánchez-Meca (2010) and Webster and Watson (2011). Based on these works, the following parameters have been taken into account: empirical articles evaluated by blind peers, published in scientific journals during the last 10 years (January 2009-April 2019), in English and Spanish. The databases used for the search were: ABI/Inform, Emerald and Web of Science as these include important research on entrepreneurship opportunities (George et al., 2016).

The search for bibliographic sources was carried out following the methodology proposed by Platt (1981), which has been used in previous revisions (Fayezi et al., 2017). This methodology proposes three stages that help identify and evaluate relevant publications on the subject through a systematic elimination process.

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In the first stage, the search was carried out using the keywords: entrepreneurship, opportunity recognition, opportunity discovery, opportunity creation, opportunity identification, taking into account the three possible perspectives of identifying opportunities raised by Sarasvathy et al. (2003). From this search, 3119 items were obtained. From this total, those articles that did not belong to the field of entrepreneurship were separated, as well as publishers, chapters and revisions of book, news, duplicate documents and others with characteristics other than those of interest, after which 2495 articles were maintained.

In the second stage, an analysis of terms was carried out in titles, abstracts and keywords (Fayezi et al., 2017) to identify those that did not match the intentions of this review. To this end, only those documents that presented an approach to entrepreneurship were chosen as an opportunity-focused process and also those focused on the first stage of the model posed by Shane and Venkataraman (2000), resulting in 475 articles. Of this total, 15 literature reviews, two meta-analyses, two methodological articles, and 47 case studies were extracted.

In the third stage, the abstracts and conclusions of the resulting articles were thoroughly reviewed and those whose analysis units were not individuals or who did not consider one or more personality traits or factors were excluded. At the end of this process, 30 articles were obtained: 1 with the approach of opportunity creation, 4 with the approximation of discovery, 11 with the recognition approach and 14 with the approximation of identification of entrepreneurship opportunities.

This process was carried out manually and using Excel program. Some of the fields included in the table prepared for the analysis were: perspective on opportunity, author(s), titles, year, journal, intention of the document, conclusions, among others. The following section shows the most important findings obtained.

3. Main findings

Table 1 summarizes the most important results found in each of the articles included in this review. Table 2 lists the individual factors that are relevant to the identification of business opportunities, based on the items in which they have been included. Figure 1 is a visual representation of how factors have often been included in the analyzed articles through a tag cloud. Tables 1 and 2 are sorted chronologically.

To group the characteristics found, the classification of individual competences suggested by Lahti (1999) was considered, defined as an interrelated set of knowledge, abilities, skills, and other characteristics that contribute to the success of an individual (Lahti, 1999). Other researchers have also taken this definition by specifying, in some cases, other types of competences such as traits, motivations or interests (Ismail et al., 2015; Sánchez, 2011, 2013; Schelfhout et al., 2016). For this review the factors are grouped into knowledge, skills, traits and other characteristics.

Table 1.	Summary	of articles
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Author (s)	Title of the article in Spanish	Results
Ucbasaran, Wes- thead and Wright (2009)	The scope and nature of the identification of opportunities by experienced entrepreneurs	• Individuals with previous ventures iden- tify more opportunities. However, when the number of failed businesses is very high the number of identified opportu- nities decreases.
Westhead, Ucba- saran and Wright (2009)	Search for Information and Opportunity Identification: The Importance of Previous Business Ownership Expe- rience	 Serial entrepreneurs identify more opportunities than novice entrepreneurs. Portfolio entrepreneurs identify more opportunities than serial entrepreneurs and novice. Higher levels of business capacity and greater intensity of information search favor the identification of opportunities.
Ramos-Rodríguez, Medina-Garrido, Lorenzo-Gómez and Ruiz-Navarro (2010)	What do you know or who do you know? The role of intellec- tual and social capital in the recognition of opportunities	• Access to external knowledge through social networks in which individuals contribute to the development of capacities for the recognition of new opportunities.
Shane, Nicolaou, Cherkas and Spector (2010)	Does openness to experience and opportunity recognition have the same genetic source?	• The gene from openness to new expe- riences has a mediating effect on the re- cognition of opportunities
de Bruin and Fe- rrante (2011)	Limited opportunity: a knowle- dge-based approach to recog- nition and opportunity develo- pment.	• The type of entrepreneurship knowled- ge that is possessed, whether topical or codified, models the type of recognized opportunity.
González-Álvarez y Solís-Rodríguez (2011).	Discovery of entrepreneurship opportunities: A gender pers- pective.	• Individuals who have a higher stock of human capital and have broader social networks discover more possibilities for business creation.
Grégoire and Shepherd (2012)	Combinations of technology and market and the identifica- tion of business opportunities: an investigation of the oppor- tunity-individual nexus	• Individual differences in prior knowled- ge and business intent moderate the re- lationships between the superficial and structural similarities of opportunities and the perception of their identification.
Li and Gustafsson (2012).	Recent opportunities in China: social class identity, pre-expe- rience affiliation and identifica- tion of innovative opportunities	• Social class identity and previous expe- rience with other nascent entrepreneurs have a significant impact on innovation capacity at the opportunity identifica- tion stage.

Arentz, Sautet and Storr (2013)	Previous knowledge and iden- tification of opportunities	• Prior knowledge not only influences the field in which an opportunity can take place, but also how alert a person can be to opportunities in a given field
Wang, Ellinger and Wu (2013)	Recognition of business opportunities: an empirical study of I+R staff	• Individual self-efficacy, prior knowled- ge, social media and perception of the industrial environment about opportu- nities have positive effects on opportu- nity recognition.
Brockman (2014)	Entrepreneurial alert in the identification and develop- ment of opportunities.	• Prior knowledge, experience, creativity, scanning and active search attitude are factors that influence the business alertness, which in turn affects the discovery of opportunities.
Chang, Liu and Chiang (2014)	A study of the relationship between entrepreneurship courses and the identification of opportunities: An empirical survey	 Entrepreneurship courses have a significant impact on improving opportunities identification capabilities and entrepreneurship alertness acts as a mediating variable for this relationship. Students with prior knowledge have a better opportunity to increase business alertness after taking business courses, thus strengthening their ability to identify opportunities.
Gielnik, Krämer, Kappel and Frese (2014)	Identification and innovation of business opportunities: In- vestigating the interaction of the acquisition and processing of information.	 Active search for information positively moderates the effect that low levels of business experience have on identifying opportunities, Active search for information improves the positive effect of divergent thinking on identifying opportunities.
Foo, Uy, & Mur- nieks (2015)	More than affective valence: Discovering the influences in Valence and the activation in identifying opportunities	• Future research will benefit from the inclusion of affective valence and affective activation, in the research for the identification of opportunities.
Kedmenec, Šeb- jan and Tominc (2015)	Effect of Rurality and Human Capital Resources in the Pro- cess of Identifying Entrepre- neurial Opportunities	• High levels of human capital sources, consistent education, skills training and entrepreneurship knowledge and experience have a significant and positive effect on identifying opportunities.
Ruiz-Arroyo, Sanz-Espino- sa and Fuen- tes-Fuentes (2015)	Entrepreneurial alert and prior knowledge for the iden- tification of entrepreneurial opportunities: the moderating role of social networks	• There is a negative influence on prior knowledge about the number of opportunities identified. The entrepreneurial alert leads to a greater number of identified opportunities.

Shane and Nicolaou (2015)	Creative personality, recog- nition of opportunities and tendency to start businesses: A study of genetic predisposi- tions	 Individuals with creative personalities are more likely to identify new opportunities and start a business. Genetic factors explain some of the correlation between creative personality and business behavior.
Tocher, Oswald and Hall (2015)	Proposing social resources as catalysts for the creation of opportunities.	• Social capital and social competence facilitate the entrepreneur's ability to navigate the complex process of transforming business ideas into viable opportunities.
Barucic and Umi- hanic (2016)	Business education as a re- cognition factor for business opportunities to start a new business.	• Entrepreneurship knowledge and skills are positively related to opportunity recognition.
Karimi, Biemans, Lans, Chizari and Mulder (2016)	The Impact of Business Edu- cation: A Study of Business In- tentions and the identification of opportunities for Iranian students	 Elective and compulsory entrepreneurship education course programs had positive and significant impacts on students' subjective standards as well as on the control of perceived behavior. Elective programs significantly increase students' business intention, although this increase is not significant for mandatory programs.
Mueller and Shepherd (2016)	Learning to the fullest the ex- periences of failure: Exploring the relationship between bu- siness failure and identifying business opportunities	 Learning based on failed experiences is greater for entrepreneurs with more cognitive tools. Those with structured opportunities and an intuitive cognitive style, prior knowledge in professional fields, nega- tively moderate this relationship.
Nikraftar and Hosseini (2016)	Factors that affect the recogni- tion of business opportunities in the tourism of small and medium-sized enterprises	 Individual self-efficacy, prior knowledge and social media have positive effects on the business alertness. Enterprise alertness contributes signifi- cantly to business opportunity recogni- tion.
Prandelli, Pas- quini and Verona (2016)	Understanding the user: An experimental design on taking perspectives in the discovery of entrepreneurship opportu- nities.	 The cognitive mechanism of perspective-taking improves the ability to discover opportunities. Understanding customers and markets allows entrepreneurs to fill their information brokers with relevant and original ideas.

Ren, Shu, Bao and Chen (2016)	Connecting network ties with the discovery and exploitation of business opportunities: the role of affective and cognitive trust.	• While affective confidence mediates the positive effects of network relations on the discovery and exploitation of opportunities, cognitive confidence moderates their relationships.
Song, Min, Lee and Seo (2017)	The Effects of Network Depen- dency on Opportunity Recog- nition: A Moderate Mediation Model of Knowledge Acquisi- tion and Business Orientation	 Opportunity recognition is most effectively achieved through networking, knowledge acquisition, and business orientation. Acquiring positively average the knowledge between network reliability and opportunity recognition.
St-Jean et al. (2017)	Can Business Mentors Act as Brokers and Opportunity Ena- blers among College Students?	• Mentors in the market improve the identification and exploitation of opportunities by their students. Therefore, mentors act as intermediaries and opportunity facilitators.
Hanohov and Bal- dacchino (2018)	Recognition of opportunities in sustainable entrepreneurs- hip: an exploratory study.	• Knowledge of natural and community environments, motivation to develop individual gains and gains for others, and the knowledge of entrepreneurship influences the identification of sustaina- ble opportunities.
Kim, Choi, Sung and Park (2018)	The role of problem-solving ability in innovative behavior and opportunity recognition in university students	• The more experience and knowledge of entrepreneurship, gained through pro- blem solving and innovative behavior, the greater the chances of recognizing opportunities.
Schmitt, Rosing, Zhang and Lea- therbee (2018)	A dynamic model of business uncertainty and identification of business opportunities: Ex- ploration as a mediator and business self-efficacy as a mo- derator	• An increase in perceived uncertainty improves the identification of opportunities for entrepreneurs with high self-efficacy, but not for those with little self-efficacy.
Ploum, Blok, Lans and Omta (2019)	Educate for self-interest or transcendence? An empirical approach to investigating the role of moral skills in recogni- zing opportunities for the sus- tainable development.	• Moral competence, composed of regulatory competence and strategic action has a significant relationship with the number of recognized opportunities.

Working experien- ce	Experience as en- trepreneur	Education	Previous knowle- dge	Tacit knowledge	Codified knowle- dge	Knowledge	Opportunity perspective	
	×							Ucbasaran et al. (2009)
	×							Westhead et al. (2009)
	×	X	X					Ramos-Rodríguez et al. (2010)
							R	Shane et al. (2010)
				×	×			de Bruin y Ferrante (2011)
	×	×	X				D	Gonzalez-Alvarez et al. (2011)
x	×		X					Grégoire y Shepherd (2012)
x								Li y Gustafsson (2012)
			X					Arentz et al. (2013)
			X				R	Yu-Lin et al. (2013)
×			×				D	Brockman (2014)
	×							Gielnik et al. (2014)
			X					Wen-Long et al. (2014)
								Foo et al. (2015)
		X						Kedmenec et al. (2015)
			X					Ruiz-Arroyo et al. (2015)
							R	Shane y Nicolaou (2015)
							C	Tocher et al. (2015)
			×					Barucic y Umihanic (2016)
			X					Karimi et al. (2016)
			×					Mueller y Shepherd (2016)
							R	Nikraftar y Hosseini (2016)
			×				D	Prandelli, et al. (2016)
							D	Ren et al. (2016)
			×				R	Song et al. (2017)
x				×				St-jean et al. (2017)
			×					Hanohov et al. (2018)
							R	Ji Young Kim et al. (2018)
	×	×						Schmitt et al. (2018)
			×				R	Ploum et al. (2019)

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Self-	Openn	Affe	Traits	Dive	Norm. tences	Cog	Activ	Entral	Skills	p	
Self-efficacy	nnes	Affection	its	rger	mati es	nitiv	Active search	Entrepre alertness	lls	Opportunity perspective	
acy	s to			it the	ve co	e abj	arch	eneu		rtu pect	
	Openness to experiences			Divergent thought	Normative compe tences	Cognitive abilities		Entrepreneurship alertness		nity ive	
	Ŷ			-	р Р	s					
			-								Ucbasaran et al. (2009)
						x					Westhead et al. (2009)
						~					Ramos-Rodríguez et al. (2010)
										R	Shane et al. (2010)
											de Bruin y Ferrante (2011)
X										D	Gonzalez-Alvarez et al. (2011)
											Grégoire y Shepherd (2012)
											Li y Gustafsson (2012)
											Arentz et al. (2013)
×										R	Yu-Lin et al. (2013)
								X		D	Brockman (2014)
				×		X	×				Gielnik et al. (2014)
								×			Wen-Long et al. (2014)
		×				X	×				Foo et al. (2015)
×											Kedmenec et al. (2015)
								×			Ruiz-Arroyo et al. (2015)
	×									R	Shane y Nicolaou (2015)
										С	Tocher et al. (2015)
											Barucic y Umihanic (2016)
											Karimi et al. (2016)
											Mueller y Shepherd (2016)
								x		R	Nikraftar y Hosseini (2016)
×								×		D	Prandelli, et al. (2016)
										D	Ren et al. (2016)
										R	Song et al. (2017)
×											St-jean et al. (2017)
											Hanohov et al. (2018)
						x				R	Ji Young Kim et al. (2018)
×		×									Schmitt et al. (2018)
×										R	Ploum et al. (2019)

Motivation by per- sonal profits	Entrepreneurship intentions	Attitude to entre- preneurship	Other Individual Factors	Creativity	Trust	Traits	O pportunity perspective	
								Ucbasaran et al. (2009)
			-					Westhead et al. (2009)
			-					Ramos-Rodríguez et al. (2010)
							R	Shane et al. (2010)
			-					de Bruin y Ferrante (2011)
			-				D	Gonzalez-Alvarez et al. (2011)
	×		-					Grégoire y Shepherd (2012)
								Li y Gustafsson (2012)
								Arentz et al. (2013)
			-				R	Yu-Lin et al. (2013)
	×			x			D	Brockman (2014)
			_					Gielnik et al. (2014)
			_					Wen-Long et al. (2014)
			_					Foo et al. (2015)
			-					Kedmenec et al. (2015)
			_					Ruiz-Arroyo et al. (2015)
			-				R	Shane y Nicolaou (2015)
			_				С	Tocher et al. (2015)
								Barucic y Umihanic (2016)
		×	-					Karimi et al. (2016)
								Mueller y Shepherd (2016)
							R	Nikraftar y Hosseini (2016)
	×		-	×			D	Prandelli, et al. (2016)
					×		D	Ren et al. (2016)
			-				R	Song et al. (2017)
								St-jean et al. (2017)
×			-					Hanohov et al. (2018)
				x			R	Ji Young Kim et al. (2018)
				×				Schmitt et al. (2018)
							R	Ploum et al. (2019)

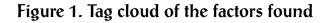
Table 2. Continuation

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User perspective Contact networks	<i>Opportunit</i> <i>perspective</i> Entrepreneuria orientation	
etworks	<i>tunity</i> <i>ective</i> leurial	
		Ucbasaran et al. (2009)
		Westhead et al. (2009)
· ×		Ramos-Rodríguez et al. (2010)
	R	Shane et al. (2010)
		de Bruin y Ferrante (2011)
· ×	D	Gonzalez-Alvarez et al. (2011)
		Grégoire y Shepherd (2012)
-		Li y Gustafsson (2012)
<u>:</u>		Arentz et al. (2013)
×	R	Yu-Lin et al. (2013)
	D	Brockman (2014)
		Gielnik et al. (2014)
		Wen-Long et al. (2014)
		Foo et al. (2015)
		Kedmenec et al. (2015)
. ×		Ruiz-Arroyo et al. (2015)
	R	Shane y Nicolaou (2015)
×	C	Tocher et al. (2015)
-		Barucic y Umihanic (2016)
·		Karimi et al. (2016)
		Mueller y Shepherd (2016)
·	R	Nikraftar y Hosseini (2016)
×	D	Prandelli, et al. (2016)
×	D	Ren et al. (2016)
×	R R	Song et al. (2017)
		St-jean et al. (2017)
		Hanohov et al. (2018)
	R	Ji Young Kim et al. (2018)
		Schmitt et al. (2018)
	R	Ploum et al. (2019)

Note: The opportunity perspective row mentions articles with a clear, sustained and consistent approach to identifying entrepreneurship opportunities posed by Sarasvathy et al. (2003), where "D" refers to the perspective of discovery, "R" to recognition and "C" to creation.





3.1.Knowledge

This competence represents the extent of the information learned by the individual, which relates directly to a task (Lahti, 1999). In the case of entrepreneurship this knowledge must be related to information from the sciences of administration, government laws and other rational aspects, such as experience and education (Ismail et al., 2015).

Prior knowledge stands out in this category, and it includes the collection of information that the individual possesses prior to the entrepreneurship process (Short et al., 2010). Relevant prior knowledge considers all the information that empowers the individual to be able to identify, understand, extrapolate, interpret and apply opportunities within a specific market (Ramos-Rodríguez et al., 2010; Ruiz-Arroyo et al., 2015). These opportunities have not been discovered by other individuals and can be transformed into profitable businesses (Gonzalez-Alvarez & Solis-Rodriguez, 2011).

The sources from which knowledge relevant to entrepreneurship can be acquired are generally classified into four categories. The first consists of education programs, where knowledge related to the administration and discovery of business opportunities is taught (Henry et al., 2005b, 2005a). The second refers to work experiences in general, which may have been developed in private, governmental or political institutions (Li & Gustafsson, 2012). The third refers to specific entrepreneurship experiences (Corbett, 2005; Driessen & Zwart, 2006), in which the individual has owned or managed to complete previous ventures (Gielnik et al., 2014). The fourth is the contact networks, which will be explained below.

3.2. Skills

According to Lathi (1999), skills are those capabilities that allow an individual to develop intellectual and physical tasks, which do not require the use of tools or equipment. In the case of entrepreneurship, these skills are defined as the skills to develop tasks typical of entrepreneurial activity (Ismail et al., 2015).

One of the predominant skills in the analysis is cognitive abilities. Shane and Venkataraman (2000) mention that the knowledge needed to undertake (mentioned above) is obtained more quickly if the entrepreneur possesses more cognitive abilities (Shane & Venkataraman, 2000). These cognitive abilities allow entrepreneurs to associate and integrate the fragmented information received from the market (Foo et al., 2015) and condition the probabilities that an individual will discover specific entrepreneurship opportunities on it (Wang et al., 2013). Other research has included indicators of cognitive abilities such as mediating factors or important moderators in entrepreneurship processes (e.g. Gaglio, 2004; Gielnik et al., 2014; Hartog et al., 2010). Cognitive abilities can be defined as those skills that the individual has, which allow to understand the information received from the different sources described above, obtaining from them relevant conclusions that allow to solve real entrepreneurship problems (Gielnik et al., 2014).

Another skill that enhances knowledge for entrepreneurship is active search, which involves efforts to find and accumulate relevant information related to the new opportunities already identified or that want to be identified (Foo et al., 2015). Two other skills, with less presence in this analysis, are: (a) regulatory competences, which are especially important for recognizing opportunities related to sustainable development, as mentioned by Ploum et al. (2019); and b) divergent thinking, which is related to creativity and it allows the individual to generate a greater amount of ideas, more original and more relevance to the entrepreneurship (Gielnik et al., 2014).

Finally, the entrepreneurial alertness has also been widely included in research related to the identification of opportunities. This factor is defined as an individual's ability to perceive opportunities, ignored by others, without intentionally seeking them (Chang et al., 2014; Kirzner, 1973). In other words, it is the individual's sensitivity towards the information about objects, incidents and patterns of behavior in the environment, especially to the problems of manufacturers and users, unsatisfied needs, interests and new combinations of resources (Ray & Cardozo, 1996, in Ardichvili et al., 2003, p. 113).

3.3. Traits

The personality traits are lasting and predictable characteristics of individuals, which help explain their behavior and the different ways they act in similar situations (Hwee Nga & Shamuganathan, 2010). These elements also help predict an individual's propensity to act (McCrae & Costa, 1990, in Rauch & Frese, 2007). More specifically, entrepreneurship-related traits are those that motivate or increase an individual's propensity to undertake

Generally speaking, contemporary theorists agree that there are five broad personality traits, explained by the model known as "Big five" or five-factor model (McCrae & Costa, 1997). This model, whose factors are: a) extraversion; b) neuroticism; c) affability, d) scrupulousness; and (e) openness to experiences, has been widely used and applied by multiple studies on entrepreneurship (e.g. Brandstätter, 2011; Obschonka et al., 2012; Zhao et al., 2010)with agreeableness failing to be associated with either. Multivariate effect sizes were moderate for the full set of Big Five personality variables on entrepreneurial intentions (multiple R = .36. For example, openness to experiences describes the degree to which the individual is imaginative, curious, original and open to new ideas (Shane et al., 2010).

However, articles in this review, which include personality traits, have focused on more specific traits, which allow to identify specific characteristics of those who successfully manage to carry out the entrepreneurship process (Jain, 2011; Martin et al., 2013; Miao et al., 2017; Rauch & Frese, 2007; Unger et al., 2011). Self-efficacy is the most predominantly researched trait and is defined as an individual's belief in his or her ability to gather and implement the personal resources, skills, and competencies needed to achieve a certain level of accomplishment in a given task (Bandura, 1977). This concept is closely related to the level of trust that the individual possesses (Ren et al., 2016), another factor found in this review.

Another trait found is creativity and is defined as the "ability of the individual to discover something that is new, useful, and valuable" (Jain, 2011, p. 132). In its one-dimensional version, creativity has been a construct quite related to entrepreneurship, especially for the approach to creating opportunities (Gielnik et al., 2012; Wright et al., 2007).

3.4. Other individual factors

Another predominant factor refers to the contact networks held by the person. It is especially important for Kirzner's proposed opportunity identification perspective (1973), in which it is stated that contact networks are crucial sources of information, as they allow access to potential valuable knowledge (DeTienne & Chandler, 2004; Sarasvathy et al., 2003). According to Song et al. (2017) contact networks can be defined as the connections the individual has with other people or organizations in his/her environment, which are intended to exchange relevant information about the market.

This factor is also closely related to the information brokers mentioned by Shane (2000), who argues that such brokers provide greater possibilities for obtaining valuable information about clients, market changes and other important information (Ardichvili et al., 2003; Eckhardt & Shane, 2010; Lehner & Kaniskas, 2012). In addition, the contact networks represent a social orientation on the part of the entrepreneur (Abuzhuri & Hashim, 2017) once he/she has understood that in order to perform business ideas, connections with other individuals are required (Oosterbeek et al., 2010, p. 446). In the revised articles, some research was also found (Gonzalez-Alvarez & Solis-Rodriguez, 2011; Ramos-Rodríguez et al., 2010; Tocher et al., 2015) where the term social capital is used to refer to the contact networks and reciprocity rules associated with them. More specifically, Song et al. (2017) use the "network reliability" factor, which not only evaluates the size of the network but also its quality.

On the other hand, entrepreneurship intentions (an element that has been included in several of the research analyzed) represent the degree to which an individual considers starting a company in the near future (Grégoire & Shepherd, 2012), i.e. the willingness to become an entrepreneur (Prandelli et al., 2016). According to Ajzen's planned behavior theory (1991), the intentions of performing a particular activity represent an effective predictor of the current activity, thus being ideal for measuring actions that happen at uncertain moments, such as the beginning of an enterprise.

The last three factors found in this review have had a presence in a few articles. The first, the motivations for personal profits, which are included in the article by Hanohov and Baldacchino (2018), who argue that this type of motivation increases the individual's attention to viable and sustainable opportunities over time, so they also increase their chances of recognizing an opportunity for a sustainable entrepreneurship. On the other hand, entrepreneurial guidance provides the individual more propensity to take risks, greater innovation and proactivity, which foster a more appropriate attitude for entrepreneurship decision-making, such as identifying opportunities (Song et al., 2017). Finally, the user perspective is included in the research of Prandelli et al. (2016) as an important element for the identification of entrepreneurship opportunities since they generate skills in the entrepreneur that allow to interpret mental states and anticipate actions of potential consumers.

4. Conclusions

Of all the individual factors found in the analysis, five stand out by having more presence in the articles and by showing more positive and significant effects on the identification (or creation) of opportunities for entrepreneurship: prior knowledge, entrepreneurial alertness, self-efficacy, creativity, and contact networks. Prior knowledge allows individuals to have more tools to identify or develop profitable opportunities, as mentioned in Louis Pasteur's famous phrase: fortune favors the prepared minds. The entrepreneurial alertness allows an individual to identify business opportunities ignored by others, without the need to intentionally look for them. Self-efficacy is a factor that characterizes entrepreneurs who rely on the skills acquired over their lifetime, providing more determination when defining whether or not there is a real business opportunity. On the other hand, creativity is a very important personality trait for all types of ventures, but especially for those business ideas that are based on the creation of business opportunities. Finally, contact networks represent an important enhancer for other factors, especially for obtaining information and knowledge, which ultimately serve to connect ideas and thus identify a greater number of opportunities for entrepreneurship.

5. Limitations and future research

This research has limitations. The first is that the analysis of the revised articles was obtained from the ABI/Inform, Emerald and Web of Science repositories, which include an important research group on entrepreneurship opportunities (George et al., 2016). However, future research can be done including SCOPUS' SciVerse database, which is currently the most complete database of entrepreneurship-related articles.

The second limitation present in any review article is that relevant articles, that have not been properly catalogued or that did not include the key terms used for the search in their titles, abstracts or other important metadata, could have been excluded. On the other hand, while this review includes both articles published in English and Spanish, a non-negligible number of articles have been published in languages other than those mentioned. Therefore, future research would benefit from the inclusion of research conducted or translated in other languages.

Future research is also needed to reinforce the findings and conclusions reached in this review. In addition, it would also be important for future literature reviews to focus on the other stages of entrepreneurship, i.e. they can analyze the factors relevant to the evaluation and exploitation of entrepreneurship opportunities. An implication for researchers is that the findings of this research promote the search for research gaps, which can be analyzed in later studies.

References

- Abuzhuri, N.M., & Hashim, N.B. (2017). The Role of Entrepreneurial Opportunity Recognition on Relationship among Entrepreneurship Education and Entrepreneurial Career Option. *European Journal of Business and Management*, 9(30), 99-106.
- Ajzen, I. (1991). The theory of planned behavior. Orgnizational Behavior and Human Decision Processes, 50, 179-211. https://doi.org/10.1016/0749-5978(91)90020-T
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A Theory of Entrepreneurial Opportunity Identification and Development. *Journal of Business Venturing*, 18, 105-123. https://doi.org/10.1016/S0883-9026(01)00068-4
- Arentz, J., Sautet, F., & Storr, V. (2013). Prior-knowledge and opportunity identification. Small Business Economics, 41(2), 461-478. https://doi.org/10.1007/s11187-012-9437-9

- Bae, T. J., Qian, S., Miao, C., & Fiet, J.O. (2014). The Relationship Between Entrepreneurship Education and Entrepreneurial Intentions: A Meta-Analytic Review. Entrepreneurship: Theory and Practice, 38(2), 217-254. https://doi.org/10.1111/etap.12095
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191-215. https://doi.org/10.1037/0033-295X.84.2.191
- Baron, R. a. (2006). Opportunity Recognition as Pattern Recognition. Academy of Management Perspectives, 20, 104-120. https://doi.org/10.5465/AMP.2006.19873412
- Barucic, A., & Umihanic, B. (2016). Entrepreneurship Education as a Factor of Entrepreneurial Opportunity Recognition for Starting a New Business. Management, 21(2), 27-44.
- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. Personality and Individual Differences, 51(3), 222-230. https://doi.org/10.1016/j.paid.2010.07.007
- Brockman, B.K. (2014). Entrepreneurial Alertness in Opportunity Identification and Opportunity Development. Journal of Business and Entrepreneurship, 26(2), 27-44. https://bit.ly/31if1mC
- Chang, W.L., Liu, W.G.H., & Chiang, S.M. (2014). A study of the relationship between entrepreneurship courses and opportunity identification: An empirical survey. Asia Pacific Management Review, 19(1), 1-24. https://doi.org/10.6126/APMR.2014.19.1.01
- Corbett, A.C. (2005). Experiential learning within the process of opportunity identification and exploitation. Entrepreneurship Theory and Practice, 29(4), 473-491. https://doi.org/10.1111/j.1540-6520.2005.00094.x
- de Bruin, A.M., & Ferrante, F.M. (2011). Bounded Opportunity: A Knowledge-Based Approach to Opportunity Recognition and Development. Entrepreneurship Research Journal, 1(4). https://doi.org/10.2202/2157-5665.1018
- DeTienne, D.R., & Chandler, G.N. (2004). Opportunity Identification and Its Role in the Entrepreneurial Classroom: A Pedagogical Approach and Empirical Test. Academy of Management Learning & Education, 3(3), 242-257. https://doi.org/10.5465/AMLE.2004.14242103
- Driessen, M.P., & Zwart, P.S. (2006). De E-Scan Ondernemersdtest ter beoordeling van ondernemerscharp. 4(4), 14. https://bit.ly/33ql37e
- Eckhardt, J. T., & Shane, S. (2003). Opportunities and entrepreneurship. Journal of Management, 29(3), 333-349. https://doi.org/10.1016/S0149-2063(02)00225-8
- Eckhardt, J. T., & Shane, S. (2010). Handbook of Entrepreneurship Research. Handbook of Entrepreneurship Research (pp. 47-76). https://doi.org/10.1007/978-1-4419-1191-9
- Favezi, S., Zutshi, A., & O'Loughlin, A. (2017). Understanding and Development of Supply Chain Agility and Flexibility: A Structured Literature Review. International Journal of Management Reviews, 19(4), 379-407. https://doi.org/10.1111/ijmr.12096
- Foo, M. Der, Uy, M.A., & Murnieks, C. (2015). Beyond Affective Valence: Untangling Valence and Activation Influences on Opportunity Identification. Entrepreneurship: Theory and Practice, 39(2), 407-431. https://doi.org/10.1111/etap.12045
- Gaglio, C.M. (2004). The role of mental simulations and counterfactual thinking in the opportunity identification process. Entrepreneurship-Theory and Practice, 28(6), 533-552. https://doi.org/10.1111/j.1540-6520.2004.00063.x
- Gartner, W.B., Shaver, K.G., & Liao, J.J. (2008). Opportunities As Attributions: Categorizing Strategic Issues From An Attributional Perspective. Strategic Entrepreneurship Journal, 2(1), 301-315. https://doi.org/10.1002/sej
- George, N.M., Parida, V., Lahti, T., & Wincent, J. (2016). A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors. International Entrepreneurship and Management Journal, 12(2), 309-350. https://doi.org/10.1007/s11365-014-0347-y
- Gielnik, M.M., Frese, M., Graf, J.M., & Kampschulte, A. (2012). Creativity in the opportunity identification process and the moderating effect of diversity of information. Journal of Business Venturing, 27(5), 559-576. https://doi.org/10.1016/j.jbusvent.2011.10.003
- Gielnik, M.M., Krämer, A.C., Kappel, B., & Frese, M. (2014). Antecedents of Business Opportunity Identification and Innovation: Investigating the Interplay of Information Processing and Information Acquisition. Applied Psychology, 63(2), 344-381.

https://doi.org/10.1111/j.1464-0597.2012.00528.x

- Gonzalez-Alvarez, N., & Solis-Rodriguez, V. (2011). Discovery of entrepreneurial opportunities: A gender perspective. Industrial Management and Data Systems, 111(5), 755-775. https://doi.org/10.1108/02635571111137296
- Grégoire, D.A., Corbett, A.C., & Mcmullen, J.S. (2011). The Cognitive Perspective in Entrepreneurship : An Agenda for Future Research The Cognitive Perspective in Entrepreneurship : An Agenda for Future Research. *Journal of Management Studies*, 6(48), 1443-1477. https://doi.org/10.1111/j.1467-6486.2010.00922.x
- Grégoire, D.A., & Shepherd, D.A. (2012). Technology-market combinations and the identification of entrepreneurial opportunities: An investigation of the opportunity-individual nexus. *Academy of Management Journal*, *55*(4), 753-785. https://doi.org/10.5465/amj.2011.0126
- Hanohov, R., & Baldacchino, L. (2018). Opportunity recognition in sustainable entrepreneurship: an exploratory study. *International Journal of Entrepreneurial Behaviour and Research*, 24(2), 333-358. https://doi.org/10.1108/IJEBR-12-2015-0275
- Hartog, J., Van Praag, M., & Van Der Sluis, J. (2010). If You Are So Smart, Why Aren't You an Entrepreneur? Returns to Cognitive and Social Ability: Entrepreneurs Versus Employees. *Journal of Economics and Management Strategy*, 19(4), 947-989. https://doi.org/10.1111/j.1530-9134.2010.00274.x
- Henry, C., Hill, F., & Leitch, C. (2005a). Entrepreneurship education and training: can entrepreneurship be taught? Part I. Education + Training, 47(2), 98-111. https://doi.org/10.1108/00400910510586524
- Henry, C., Hill, F., & Leitch, C. (2005b). Entrepreneurship education and training: can entrepreneurship be taught? Part II. *Education* + *Training*, 47(3), 158-169. https://doi.org/10.1108/00400910510592211
- Hmieleski, K.M., & Powell, E.E. (2017). The Psychological Foundations of University Science Commercialization: A Review of the Literature and Directions for Future Research. *The Academy of Management Perspectives*, 32(1), 43-77. https://doi.org/10.5465/amp.2016.0139
- Hwee Nga, J.K., & Shamuganathan, G. (2010). The influence of personality traits and demographic factors on social entrepreneurship start up intentions. *Journal of Business Ethics*, 95(2), 259-282. https://doi.org/10.1007/s10551-009-0358-8
- Ismail, V.Y., Zain, E., & Zulihar. (2015). The Portrait of Entrepreneurial Competence on Student Entrepreneurs. *Procedia - Social and Behavioral Sciences*, 169(August 2014), 178-188. https://doi. org/10.1016/j.sbspro.2015.01.300
- Jain, R.K. (2011). Entrepreneurial Competencies: A Meta-analysis and Comprehensive Conceptualization for Future Research. Vision: The Journal of Business Perspective, 15(2), 127-152. https://doi. org/10.1177/097226291101500205
- Karimi, S., Biemans, H.J.A., Lans, T., Chizari, M., & Mulder, M. (2016). The Impact of Entrepreneurship Education: A Study of Iranian Students' Entrepreneurial Intentions and Opportunity Identification. *Journal of Small Business Management*, 54(1), 187-209. https://doi.org/10.1111/jsbm.12137
- Kedmenec, I., Šebjan, U., & Tominc, P. (2015). Effect of Rurality and Human Capital Resources in the Entrepreneurial Opportunity Identification Process / Vpliv ruralnega okolja in človeškega kapitala v procesu zaznavanja podjetniških priložnosti. Naše Gospodarstvo/Our Economy, 61(2), 35-44. https://doi.org/10.1515/ngoe-2015-0008
- Kim, J.Y., Choi, D.S., Sung, C.S., & Park, J.Y. (2018). The role of problem solving ability on innovative behavior and opportunity recognition in university students. *Journal of Open Innovation: Technology, Market, and Complexity, 4*(1). https://doi.org/10.1186/s40852-018-0085-4
- Kirzner, I. M. (1973). Competition and Entrepreneurship. University of Chicago Press.
- Lahti, R. K. (1999). Identifying and Integrating Individual Level and Organizational Level Core Competencies. Journal of Business and Psychology, 14(1), 59-75. https://doi.org/10.1023/A:1022906400927
- Lehner, O.M., & Kaniskas, J. (2012). Opportunity recognition in social entrepreneurship: A thema-

tic meta analysis. *Journal of Entrepreneurship*, 21(1), 25-58. https://doi.org/10.1177/097135571102100102

- Li, T., & Gustafsson, V. (2012). Nascent entrepreneurs in China: social class identity, prior experience affiliation and identification of innovative opportunity. *Chinese Management Studies*, 6(1), 14-35. https://doi.org/10.1108/17506141211213708
- Martin, B.C., McNally, J.J., & Kay, M.J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28(2), 211-224. https://doi.org/10.1016/j.jbusvent.2012.03.002
- McCrae, R.R., & Costa, P.T. (1997). Personality Trait Structure as a Human Universal. American Psychologist, 52(5), 509-516.
- Miao, C., Qian, S., & Ma, D. (2017). The Relationship between Entrepreneurial Self-Efficacy and Firm Performance: A Meta-Analysis of Main and Moderator Effects. *Journal of Small Business* Management, 55(1), 87-107. https://doi.org/10.1111/jsbm.12240
- Mitchelmore, S., & Rowley, J. (2013). Entrepreneurial competencies of women entrepreneurs pursuing business growth. Journal of Small Business and Enterprise Development, 20(1), 125-142. https:// doi.org/10.1108/14626001311298448
- Mueller, B. A., & Shepherd, D. A. (2016). Making the Most of Failure Experiences: Exploring the Relationship Between Business Failure and the Identification of Business Opportunities. *Entrepreneurship: Theory and Practice*, 40(3), 457-487. https://doi.org/10.1111/etap.12116
- Nikraftar, T., & Hosseini, E. (2016). Factors affecting entrepreneurial opportunities recognition in tourism small and medium sized enterprises. *Tourism Review*, 71(1), 6-17. https://doi.org/10.1108/TR-09-2015-0042
- Obschonka, M., Silbereisen, R.K., & Schmitt-Rodermund, E. (2012). Explaining Entrepreneurial Behavior : Dispositional Personality ... *The Career Development Quarterly*, 60(June), 178-191. ht-tps://doi.org/10.1002/j.2161-0045.2012.00015.x
- Oosterbeek, H., van Praag, M., & Ijsselstein, A. (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54(3), 442-454. https://doi.org/10.1016/j.euroecorev.2009.08.002
- Platt, J. (1981). Evidence and proof in documentary research: 1. Some specific problems of documentary research. *Sociological Review*, 29(1), 31-52. https://bit.ly/2DBjHvo
- Ploum, L., Blok, V., Lans, T., & Omta, O. (2019). Educating for self-interest or -transcendence? An empirical approach to investigating the role of moral competencies in opportunity recognition for sustainable development. *Business Ethics*, 28(2), 243-260. https://doi.org/10.1111/beer.12214
- Prandelli, E., Pasquini, M., & Verona, G. (2016). In user's shoes: An experimental design on the role of perspective taking in discovering entrepreneurial opportunities. *Journal of Business Venturing*, 31(3), 287-301. https://doi.org/10.1016/j.jbusvent.2016.02.001
- Ramos-Rodríguez, A. R., Medina-Garrido, J.A., Lorenzo-Gómez, J.D., & Ruiz-Navarro, J. (2010). What you know or who you know? The role of intellectual and social capital in opportunity recognition. *International Small Business Journal*, 28(6), 566-582. https://doi.org/10.1177/0266242610369753
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. European Journal of Work and Organizational Psychology, 16(4), 353-385. https:// doi.org/10.1080/13594320701595438
- Ren, S., Shu, R., Bao, Y., & Chen, X. (2016). Linking network ties to entrepreneurial opportunity discovery and exploitation: the role of affective and cognitive trust. *International Entrepreneurship and Management Journal*, *12*(2), 465-485. https://doi.org/10.1007/s11365-014-0350-3
- Ruiz-Arroyo, M., Sanz-Espinosa, I., & Fuentes-Fuentes, M. del M. (2015). Alerta emprendedora y conocimiento previo para la identificación de oportunidades emprendedoras: El papel moderador de las redes sociales. *Investigaciones Europeas de Dirección y Economía de la Empresa*, 21(1), 47-54. https://doi.org/10.1016/j.iedee.2014.07.002

- Sánchez-Meca, J. (2010). Cómo realizar una revisión sistemática y un meta-análisis. Aula Abierta, 38(2), 53-63.
- Sánchez, J.C. (2011). University training for entrepreneurial competencies: Its impact on intention of venture creation. International Entrepreneurship and Management Journal, 7(2), 239-254. https://doi.org/10.1007/s11365-010-0156-x
- Sánchez, J.C. (2013). The impact of an entrepreneurship education program on entrepreneurial competencies and intention. *Journal of Small Business Management*, 51(3), 447-465. https://doi.org/10.1111/jsbm.12025
- Sarasvathy, S. D., Dew, N., Velamuri, S. R., & Venkataraman, S. (2003). Three Views of Entrepreneurial Opportunity. In Springer (Ed.), Handbook of Entrepreneurship Research (pp. 141-160). https://doi.org/10.1007/978-1-4419-1191-9_4
- Schelfhout, W., Bruggeman, K., & De Mayer, S. (2016). Evaluation of entrepreneurial competence through scaled behavioural indicators: Validation of an instrument. Studies in Educational Evaluation, 51, 29-41. https://doi.org/10.1016/j.stueduc.2016.09.001
- Schmitt, A., Rosing, K., Zhang, S.X., & Leatherbee, M. (2018). A Dynamic Model of Entrepreneurial Uncertainty and Business Opportunity Identification: Exploration as a Mediator and Entrepreneurial Self-Efficacy as a Moderator. In Entrepreneurship Theory and Practice (Vol. 42, Issue 6). https://doi.org/10.1177/1042258717721482
- Schumpeter, J. A. (1934). The theory of economic development. Harvard University Press.
- Shane, S. (2012). Reflections On The 2010 Amr Decade Award: Delivering On The Promise Of Entrepreneurship As A Field Of Research. Academy of Management Review, 37(January), 10-20. https://doi.org/10.5465/armr.2011.0079
- Shane, S., & Nicolaou, N. (2015). Creative personality, opportunity recognition and the tendency to start businesses: A study of their genetic predispositions. *Journal of Business Venturing*, 30(3), 407-419. https://doi.org/10.1016/j.jbusvent.2014.04.001
- Shane, S., Nicolaou, N., Cherkas, L., & Spector, T. D. (2010). Do Openness To Experience And Recognizing Opportunities Have The Same Genetic Source? *Human Resource Management*, 49(2), 291- 303. https://doi.org/10.1002/hrm
- Shane, S., & Venkataraman, S. (2000). The Promise of Entrepreneurship as a Field of Research. *The Academy of Management Review*, 25(1), 217-226. https://doi.org/10.2307/259271
- Short, J.C., Ketchen, D.J., Shook, C.L., & Ireland, R.D. (2010). The concept of "Opportunity" in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management*, 36(1), 40-65. https://doi.org/10.1177/0149206309342746
- Song, G., Min, S., Lee, S., & Seo, Y. (2017). The effects of network reliance on opportunity recognition: A moderated mediation model of knowledge acquisition and entrepreneurial orientation. *Technological Forecasting and Social Change*, 117, 98-107. https://doi.org/10.1016/j.techfore.2017.01.004
- St-Jean, É., Tremblay, M., Janssen, F., Baronet, J., Loué, C., & Nafa, A. (2017). May business mentors act as opportunity brokers and enablers among university students? *International Entrepreneurship and Management Journal*, *13*(1), 97-111. https://doi.org/10.1007/s11365-016-0397-4
- Tocher, N., Oswald, S.L., & Hall, D.J. (2015). Proposing social resources as the fundamental catalyst toward opportunity creation. *Strategic Entrepreneurship Journal*, 9(2), 119-135. https://doi.org/10.1002/sej.1195
- Ucbasaran, D., Westhead, P., & Wright, M. (2009). The extend and nature of opportunity identification by experienced entrepreneurs. *Journal of Business Venturing*, 24(1), 99-115.
- 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
- Venkataraman, S. (1997). The Distinctive Domain of Entrepreneurship Research. Advances in Entrepreneurship, Firm Emergence and Growth, 3(October), 119-138. https://doi.org/10.2139/ssrn.1444184
- Wang, Y.L., Ellinger, A.D., & Wu, Y.C. J. (2013). Entrepreneurial opportunity recognition: An em-

pirical study of R&D personnel. *Management Decision*, *51*(2), 248-266. https://doi.org/10.1108/00251741311301803

- Webster, J., & Watson, R.T. (2011). Analyzing the Past To Prepare for the Future: Writing a Review. MIS *Quartely*, 26(2), 12. www.jstor.org/stable/4132319
- Westhead, P., Ucbasaran, D., & Wright, M. (2009). Information Search and Opportunity Identification: The Importance of prior Business Ownership Experience. International Small Business Journal, 27(6), 659-680. https://doi.org/10.1177/0266242609344255
- Wright, M., Hmieleski, K.M., Siegel, D.S., & Ensley, M.D. (2007). The Role of Human Capital in Technological Entrepreneurship. Entrepreneurship Theory and Practice, 31(6), 791-806. https://bit.ly/3hLz8AB
- Zhao, H., Seibert, S.E., & Lumpkin, G.T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381-404. ht-tps://doi.org/10.1177/0149206309335187