

MSc International Business Economics



Master's Thesis

Factors of Entrepreneurial Opportunity

Recognition: A Systematic Review of Evidence in
the Last Decade

Student: *Iulian Grecu*

Supervisor: Assoc. Prof. *Romeo V. Turcan*



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EXECUTIVE SUMMARY

The main purpose of this paper is to integrate the concept of entrepreneurial opportunity recognition into the mainstream international business literature. By systematically reviewing 22 peer-reviewed journal articles from a broad range of disciplines written in the period of 2003 to 2013 touching on the subject of entrepreneurial opportunity recognition, we have identified three main sets of factors influencing the opportunity recognition process, sustained by the latest empirical evidence.

By exploring and comparing their theoretical backgrounds, approaches, methods and findings, we outline potential new directions for research into opportunity recognition that could trigger the motivation for a further research into the matter of both international entrepreneurship and international business scholars.

After having gathered the empirical evidence, we identified three distinct sets of factors that stimulate the opportunity recognition process. The first set refers to socio-political factors such as government policies, historical legacy, and cultural differences. The second set of factors refers to the industry and market characteristics of a country or region, the information that circulates, and the networks formed within them. The third set puts emphasis primarily on the individual or also known as the entrepreneur in our case. All of these sets include a wide variety of influential factors ranging from government policies to entrepreneurs' intrinsic motivation to embark on a new venture.

Through our research efforts we covered existing gaps in international business literature and mainly presenting the main influential factors of entrepreneurial opportunity recognition. Thus, we intend to draw scholarly attention towards the importance of this phenomenon in the internationalization process of international new ventures.

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***Ability is nothing
without opportunity.***

Napoleon Bonaparte

1. Introduction

International business scholars have been addressing the issue of firm internationalization from various theoretical and methodological perspectives. Although many scholars highlight the importance of adopting an entrepreneurial approach when looking for new business opportunities internationally, they have not put enough emphasis on the process of opportunity identification as such, by explaining what facilitates this process.

International entrepreneurship scholars have been addressing several different aspects of international opportunity recognition as being the central problem in the international entrepreneurship research. (Dimitratos & Jones, 2005)

The extant literature in the field of international business, and the research efforts made during the emergence of the concept serve as important evidence that the concept needs to a thorough empirical investigation. Moreover, given the commonalities of the two fields of studies, international business and international entrepreneurship, it is necessary to position the research of opportunity recognition at their intersection which could subsequently lead to a better understanding of firm internationalization process as a whole.

Therefore, in our research we integrate the concept of opportunity recognition into the mainstream international business literature by systematically reviewing all empirically relevant evidence during the first decade of the twenty first century. By doing so we intend to determine mainly **what factors stimulate the process of entrepreneurial opportunity recognition.**

A more detailed explanation of the existing gap and the issue being investigated will be presented in the following chapter *Preamble*. This chapter will emphasize the current status

of research regarding entrepreneurial opportunity recognition and its theoretical foundations to begin with.

Following *Preamble*, the *Research Methodology* chapter will provide the reader with a thorough insight into the methods and techniques employed in this research, that is, the means by which we intend to accomplish our aforementioned goal of answering the main research question. This chapter will also include the summaries of the reviewed articles. The methodological approach and its philosophical implications will be discussed in the *Philosophical Reflections* chapter.

Subsequently, we proceed to the empirical part of this project in the *Systematic Review* chapter where a thorough discussion concerning theories and employed methodologies of the reviewed articles is developed. The main findings will be presented in the following chapter *Findings*.

After conducting the review, in the *Data Analysis* chapter we further analyze the previously collected empirical evidence and present the results of our systematic review. This chapter will lead to answering the main research question underlying this project.

Finally, the concluding chapters *Recommendations* and *Conclusion and Limitations* will discuss the implications of this research for the field of international business, the gaps we intended to cover herein, and the main limitations and concerns underlying the research.

2. Preamble

International entrepreneurship is recognized by scholars as a distinct field of study which contributes greatly to the mainstream international business literature. (Coviello et al., 2011) Shane (2000) defines entrepreneurship as a process by which “opportunities for creating future goods and services are discovered, evaluated and exploited.”

Throughout the last decade, more and more already established firms adopt an entrepreneurial posture which has a positive impact on their performance. (Balabanis & Katsikea, 2002; Ciravegna et al., 2013) Therefore, an entrepreneurial approach to opportunity identification globally should draw attention of both executives and entrepreneurs.

Opportunity recognition becomes a critical area for entrepreneurship scholars to research. (Ardichvili et al., 2003; Short et al., 2010) Many of them have already pointed out the importance of opportunity recognition in the international entrepreneurship studies, but few of them focused primarily on enlisting the factors that stimulate and affect the opportunity recognition process in the first stages of entrepreneurial venture.

Therefore, a bigger emphasis should be put on how these opportunities are identified rather than exploited and fructified.

Although theoretically there have been made many attempts on clarifying this concept, however in the last decade it lacked empirical evidence. The empirical research on international opportunity recognition research is in an embryonic stage and needs elaboration. (Ardichvili et al., 2003; Jones et al., 2011; Crump et al., 2011)

Drawing on the findings from the systematic review of the empirical research concerning opportunity recognition from other fields of study, we reflect on how these findings could

contribute to the common pool of knowledge of the international entrepreneurship and international business research.

This particular phenomenon of *opportunity recognition* is highly complex, and existing studies in the area juxtapose with many disciplines including management, organization theory, marketing, and entrepreneurship. (Ardichvili et al., 2003)

Stevenson et al. (1985) argue that a successful entrepreneur must have the ability to identify and choose the right opportunities for new ventures. Similar, Short et al. (2010) argue that entrepreneurial efforts and activities should focus on identifying and exploiting opportunities because “without opportunities there is no entrepreneurship”.

McMullan & Long (1990) posit that opportunity recognition is “the challenge of transforming a vision of what might be into a vision of what can be.” Christensen et al. (1989), see this phenomenon rather as a possibility of new profit potential through formation of a new venture or significant improvement of an existing one. Therefore, opportunities can be identified either before starting a new venture or afterwards.

Furthermore there have been many attempts of distinguishing between different types of opportunities. This effort was made by Singh et al. (2008) who distinguish between internally-stimulated opportunities and externally-stimulated opportunities and Smith et al., (2009) who distinguish between tacit and codified opportunities (see *Figure 4 Tacit versus Codified opportunities*).

Shane & Venkataraman (2000) see *opportunities* as an “objective phenomena” which entrepreneurs are all aware of, whereas *opportunity recognition* is a rather “subjective process”.

In their paper, Renko et al. (2012) discuss about the origins of opportunity and refer to the *neoclassical economic perspective* and *the Austrian view* as the foundations of entrepreneurship theory.

According to the neoclassical economic perspective, the market is in constant equilibrium maintained by the “invisible hand” and rational market players can anticipate the movement of other players. Whenever gaps occur in this equilibrium, all participants are aware of this circumstance thus no opportunities occur for potential entrepreneurs.

Building on the neoclassical theory, Schumpeter (1968) argues that technological innovations have an impact on the market equilibrium thereby creating opportunities for entrepreneurs.

In response to the neoclassical perspective, the Austrian school of economics had a different approach to entrepreneurial discovery. (Kirzner, 1997) According to the Austrian economic theory (Hayek, 1945; Kirzner, 1973; von Mises, 1949) the markets are in a state of disequilibrium, characterized by dynamic competition rather than perfect competition. (Renko et al., 2012) This state disequilibrium is advantageous and favourable for entrepreneurs which perceive this as an opportunity and thereby grasp on it.

Entrepreneurs must possess necessary knowledge that would naturally trigger an entrepreneurial alertness to opportunities. (Kirzner, 1997) Kirzner (1973) also argues that opportunity discovery must be unintentional and accidental.

Ardichvili et al. (2003) define entrepreneurial alertness as “a propensity to notice and be sensitive to information about objects, incidents, and patterns of behaviour in the environment, with special sensitivity to maker and user problems, unmet needs and interests, and novel combinations of resources.”

Research in international entrepreneurship research also suggests a multi-theoretical approach to this phenomenon (Ardichvili et al., 2013), thus Alvarez & Barney (2007) use discovery and creation theories to explain how entrepreneurial opportunities are formed. The question they addressed is whether opportunities exist independent of entrepreneurs or is it entrepreneurial behaviour and action that eventually creates these opportunities.

Chandra et al. (2009) posit that deliberate search for opportunities lead to further discovery rather than through serendipitous events. Hsieh et al. (2007) and Murphy (2011) also argue that not only opportunity recognition is preceded by serendipitous events, but it could also occur after intentional search, and activeness and networks are important prerequisites of entrepreneurial opportunity identification conducive to firm performance. (Ciravegna et al., 2013)

On the other hand however, some scholars (e.g. Ardichvili et al., 2003; Kontinen & Ojala, 2011) argue that serendipity calls for a reactive attitude towards opportunities rather than proactive.

Many researchers put emphasis on the cognitive aspects of the opportunity recognition process. (e.g. Kiss et al., 2012; McDougall & Oviatt, 2000) Singh (2000), on the other hand, focuses primarily on finding the link between the opportunity recognition and entrepreneurs' social network. He argues that a major problem could be that there may be differences in the importance of social networks to opportunity recognition among industries. Furthermore, Singh (2000) suggests that a study of other samples of entrepreneurs across industries is needed.

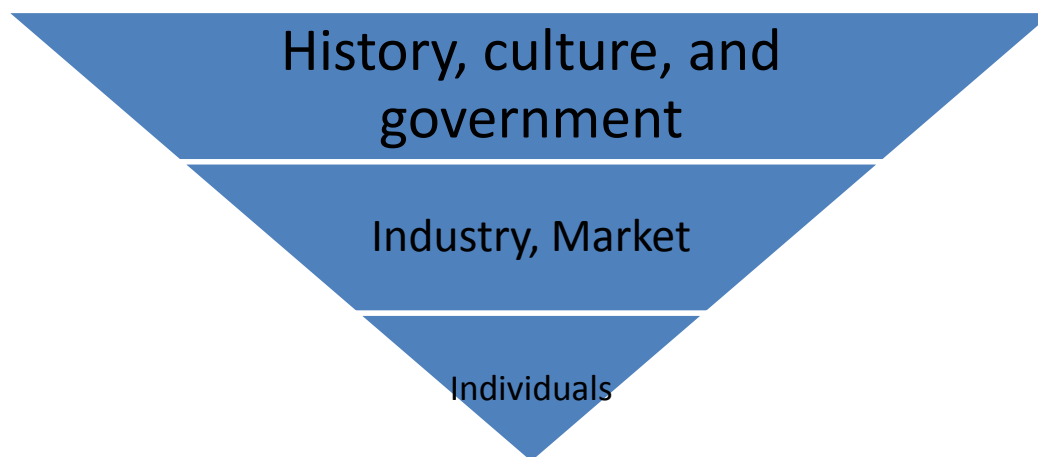
However, the question of why, when and how do some people discover and exploit international opportunities while others don't, still remains terra incognita for international entrepreneurship scholars. (Zahra et al., 2005) The phenomenon of opportunity recognition

followed by its exploitation and development is a central issue of IE and extant literature suggests that a more systematic research will help synthesize major findings concerning stimuli and factors of entrepreneurial opportunity recognition.

According to Petticrew & Roberts (2006, p.21), a systematic review is valuable “when a general overall picture of the evidence in a topic area is needed to direct future research efforts”. Therefore, the aim of a systematic review is to produce a scientific summary of the evidence in a field (Petticrew & Roberts, 2006) by identifying its key scientific contributions (Tranfield, Denyer, & Smart, 2003).

Thus, in our research paper we aim to identify what triggers entrepreneurial opportunity recognition through the lens of international entrepreneurship and international business fields of studies by means of systematic review.

Figure 1 Levels and factors of opportunity recognition



Source: own production

After having reviewed the articles we identify three main levels or sets (*see Figure 1 Levels and factors of opportunity recognition*) where the abovementioned factors that eventually lead to opportunity recognition occur.

The first level represents the socio-political factors (Fritsch, 2004; Mueller, 2007) such as the government, policies, level of corruption, and even historical background. (Aidis, 2012)

In the second level we place the industry- and market-specific factors. A major role here plays the environment or the industry that the firms operate in and where the opportunities occur, waiting for the entrepreneurs to exploit them.

However, this awareness to opportunities is developed in the third level, the level where the main role is attributed to individuals or entrepreneurs. At this point, everything that is related to entrepreneurs, their *embeddedness* in social networks (Singh, 2000), prior knowledge and education, previous experiences (Shane, 2000), and their personality traits such as self-efficacy and creativity, are inherent elements of the opportunity recognition process. (Ardichvili et al., 2003)

Within each of these three distinct layers specific factors exist and in our research we aim to explore them in depth, and discover the main factors that either jeopardize or help speed along the process of opportunity recognition.

An eclectic, cross-disciplinary approach to our research will help shed light on this particular phenomenon and its implications for both international entrepreneurship and international business which could lead to further research suggestions.

We argue that the concept of opportunity recognition calls for much greater attention from international business and international marketing scholars as there is little empirical evidence exploring the phenomenon of opportunity recognition in cross-border firm activities. (Ciravegna et al., 2013) It plays an important role in the incipience of firms' internationalization and thus a more systematic research attention than it has received so far (Chandra et al., 2009) is highly required to ensure that research on the matter is perpetuated.

We direct our research efforts towards finding a link between opportunity recognition and firms' internationalization. (Dimitratos & Jones, 2005; Styles & Seymour, 2006; Johanson & Vahlne, 2009) With this paper we review empirical studies on international opportunity recognition and opportunity identification process that exist in the different areas of studies and which have been developed from various theoretical perspectives.

By exploring and comparing their theoretical background, approaches, methods and findings, we outline potential new directions for research into opportunity recognition that could trigger the motivation for a further research into the matter to both international entrepreneurship and international business scholars.

3. Research Methodology

In this chapter will be mainly discussed the methods and techniques employed, that is, the means of data collection and their further analysis.

The role of the paradigms in our research, the methodological views chosen by the creators of knowledge that dictated the methodological approach, will be discussed in the *Philosophical Reflections* chapter. The latter will incorporate Arbner & Bjerke's (2009) three methodological views and their philosophical implications for our research. Identifying ourselves within one view is a starting point of this project, because without positioning ourselves towards how we perceive reality and what we define as truth, we cannot proceed with our research.

The whole research process herein is nothing but truth seeking, focused on depicting scientific facts and patterns for the purpose of formulating suggestions for future research, but this is pointless without an action plan, that is, a methodology.

3.1. Methods and Techniques

As we look for *generalizable explanations* to the subject of entrepreneurial opportunity recognition, given the chosen methodological view, a valuable source of information would be the results from previous research on the issue. In our view the reality has a *summative character* and searching for previous findings to be able to see the complete picture of the phenomenon being investigated will be our starting point.

Positioning ourselves at the intersection of two research areas of international business and entrepreneurship the review of these fields was pointed towards linking opportunity recognition and firm internationalization.

Although the concept of opportunity recognition has received scholarly attention in multiple studies, surprisingly, there has been little effort in systematically translating major findings underlying this concept into a comprehensive review of current knowledge. (Pittaway et al., 2004; Chandra et al., 2009; Ardichvili et al., 2003)

Due to the complex nature of the phenomenon and the multitude of factors influencing the process, there is a need to gather all relevant empirical evidence in order to analyze all aspects underlying the entrepreneurial opportunity recognition process.

As we proceeded with our search in ProQuest database, our enquiry didn't yield any significant results. The initial keyword search in the ProQuest database with the following search strings: "opportunity recognition and international" and "opportunity recognition and internationalization" with the scope "citation and document text" and the data range "all dates" yielded only 2 hits. The scarcity of research papers leads us to the conclusion that the research at this intersection is in an embryonic stage.

Therefore, a need to learn from other research streams that focuses on the concept of opportunity recognition is highly necessary in order to inform the international business scholars and direct future research efforts. (Petticrew & Roberts, 2006)

Given the scarcity of literature positioned at the intersection of in the aforementioned fields of studies, our review herein puts emphasis on empirical evidence found concerning the concept of opportunity recognition. Due to limited resources and the scope of this research (Petticrew & Roberts, 2006), our review will be restricted only to empirical papers (excluding case studies) published in peer-reviewed scholarly journals in a specific data range (2003 - 2013), while other sources such as conceptual and review papers, conference papers or book chapters were excluded.

The selected papers are English-written publications, as these are easily accessible to us, and these papers are also cross-sectional in nature.

Scarcity of extant empirical evidence on the entrepreneurial opportunity recognition phenomena in the last decade led us to the conclusion that a systematic review of empirical work should be conducted to direct the future research efforts.

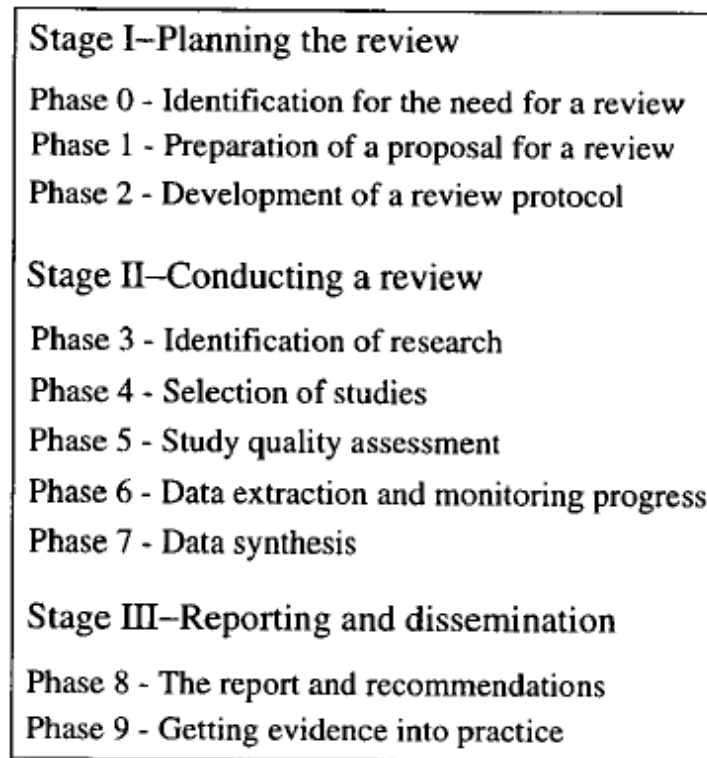
To specify a date range is an important delimitation to our research as recent technological breakthroughs continuously have an impact especially in the field of entrepreneurship by creating the “most lucrative entrepreneurial opportunities in the marketplace today”. (Singh R. , 2001)

We therefore, employed in our research the systematic review methodology. (Petticrew & Roberts, 2006) (Tranfield, Denyer, & Smart, 2003) (Mulrow, Cook, & Haynes, 1997)¹ According to Petticrew and Roberts (2006) a systematic review is necessary “when there is uncertainty about what the evidence on a particular topic shows” and a clarification of a certain concept is required by synthesizing the relevant evidence in order to “suggest directions for future research” and “identify trends” in the fields of international entrepreneurship and international business.

Our systematic review followed the steps provided by Petticrew & Roberts (2006) and Turcan, Marinova & Rana (2012) in their journal article. They suggest that there are three steps that we need to follow in the process of systematic review, this process being fully transparent which allows the steps to be easily traceable and replicable.

¹ For examples of systematic reviews based on both conceptual and empirical evidence refer to articles of (Zou & Stan, 1998), Pittaway et al. (2004), and Short et al. (2010).

Figure 2 Stages of systematic review



Source: (Tranfield, Denyer, & Smart, 2003)

The first stage is planning the review which is an iterative process of *definition, clarification and refinement*. (Petticrew & Roberts, 2006) We therefore identify the keywords within the review protocol. (Turcan, Marinova, & Rana, 2012) We base our search strings, used subsequently in the ProQuest database, on the following keywords: (i) discovery, identification, recognition as applied to opportunity; and (ii) entrepreneur, entrepreneurship, network, markets, export, performance. An example of the search string would be: (opportunity recognition) AND (entrepreneur) AND (citation and document text) AND (all databases) AND (data range 2003-2013) AND (scholarly journals, including peer-reviewed).

The techniques employed to search for papers combined the electronic (ProQuest database) and manual search. The manual search implied scanning through bibliographical sources, references, and citations of major relevant journal articles containing “opportunity recognition/discovery/identification” in their titles, abstracts or the key words specified in the

previous paragraph. This technique helped supplement the number of articles that were initially generated through electronic search. (Zou & Stan, 1998)

After specifying the search criteria, that is, the review protocol, we proceeded to conducting the review. In this stage, as Tranfield et al. (2003) suggest, we select the relevant articles followed by data extraction and data synthesis.

The search strings generated 672 results, of which 110 were screened out based on the title, abstract and content. These articles were retrieved for a detailed evaluation. (Tranfield et al., 2003) We manually scanned through these articles to identify the ones that contain empirical evidence and if these were relevantly associated with the concept of opportunity recognition.

Based on the specified criteria, our review was narrowed down to a total number of 22 relevant empirical papers on entrepreneurial opportunity recognition. A summary of reviewed articles sorted by year and journal name are presented in *Table 2 Summary of reviewed articles by source and year*.

After conducting the review, extracted data, and finalizing the data extraction form, the next step in our review was to report the results and findings see *Table 1 Data extraction form*, followed by the formulation of recommendations for future research and conclusions.

The main purpose of this review was to get an insight into the theoretical frameworks, methodological approaches and methods, findings, and contributions by means of *meta-analysis* – procedure associated to a systematic review. (Tranfield et al., 2003) (Turcan, Marinova, & Rana, 2012) Meta-analysis represents a statistical technique for combining the empirical evidence from independent studies. (Crombie & Davies, 2009) (Walsh & Downe, 2004)

In our review we have applied however a hybrid approach by combining meta-analysis procedure for pooling out empirical evidence, and narrative approach for summarizing the findings. We have also used interpretative and inductive methods to analyze the collected data using our expertise and knowledge, build our conclusions, and discuss the scope this research has for international business.

Through means of a systematic review and meta-analysis, we intend to gather all empirical evidence in the last ten years in order to demonstrate the importance of specific factors and their influence on the opportunity recognition process. Given the complexity of the phenomenon, a systematic review of the latest evidence would also help see the current status of the research in the field and identify future trends.

Table 1 Data extraction form

Nr.	Authors	Year	Purpose	Methodology	Findings
1	Wang, Yu-Lin; Ellinger, A.; Wu, Jim Yen-Chun	2013	Examine the relationships between, entrepreneurial opportunity recognition, and individual-level innovation performance.	Questionnaire data were collected from 268 senior R&D project team members.	An individual's self-efficacy, prior knowledge, social networks, and perception about the industrial environment on opportunities all had positive effects on entrepreneurial opportunity recognition.
2	Singh, R.; Gibbs, SherRhonda R.	2013	Examine the opportunity recognition processes of black nascent entrepreneurs.	Data collected from 232 black nascent entrepreneurs through web-based surveys.	Black-nascent entrepreneurs were much more likely to have pursued internally stimulated opportunities than externally stimulated opportunities.
3	Wurim, Ben Pam	2013	Opportunity Recognition and Business Idea Generation as a Foundation for Entrepreneurial Businesses in Central Nigeria	The survey investigation method was used in collecting primary data for the study from a sample of 150 central Nigeria entrepreneurs.	The information sharing aspect of social networking plays an important role in the opportunity identification process.
4	Gil-Pechuan, I.; Exposito-Langa, M.; Tomas-Miguel, J.	2013	Study the effect of factors such as Skills and Competences, Attitude and <i>Proactiveness</i> , Creativity and Innovation, Networking, Employees and Activity on SMEs.	Empirical research focused on 174 textile SME in Spain. Primary data collected from questionnaires.	There is a positive relationship between the studied factors and the international entrepreneurship development.
5	Ciravegna L.; Majano S.; Zhan, G.	2013	Study the role of <i>proactiveness</i> in firm's internationalization and the impact on export performance.	Data was collected through interviews with 109 Chinese textile manufacturers.	<i>Proactiveness</i> is an important predictor of the intensity and geographic scope of the firm's internationalization but does not however influence how fast firms find opportunities internationally. This process may be also affected by serendipitous events.

5	Ko, S.	2012	Examine the relationships among need for cognition, alertness and entrepreneurial opportunity identification.	Mail survey of 197 technology-based entrepreneurs in Hong Kong, China.	Need for cognition relates positively to entrepreneurial opportunity identification, but that alertness mediates this relationship.
7	Li, T.; Gustafsson, V.	2012	Analyze the impact of the nascent entrepreneurs' social class identity and prior experience affiliation on entrepreneurial opportunity identification.	Data collected from the CPSED. The final sample included 137 cases of new technology ventures. The survey method was employed.	The findings indicate that the social class identity and prior experience affiliation of nascent entrepreneurs (pre-determined factors) have a significant impact on the innovativeness of their entrepreneurial identification.
8	Hansen, D. ; Lumpkin G.T.; Hills, G.E.	2011	The paper examines the relationship between individual dimensions of and creativity.	Analyses were conducted using AMOS software on a sample of 145 entrepreneurs. One structural equation model (SEM) and three confirmatory factor analysis models were tested.	The five-dimensional model – consisting of preparation, incubation, insight, evaluation, and elaboration – was determined to be the best fitting model.
9	Gonzales-Alvarez, N.; Solis-Rodriguez, V.	2011	Analyze the influence of human capital and social capital on the process of opportunity discovery, and analyze the existence of gender differences both in the discovery of opportunities and in the stock of human and social capital possessed by men and women.	From a random sample of 28,888 individuals the opinion of 1,473 active entrepreneurs has been gained. Also, logistic regressions were used as a statistical method to test the hypotheses proposed.	The results indicate that individuals possessing a greater stock of human capital, as well as those who are highly involved in broad social networks, discover more chances of business creation. Men discover more business opportunities and possess more human and social capital than their female counterparts.

10	Gonzales, M.; Husted, B.	2011	This study examines the effect that human capital has on opportunity identification among men and women in Mexico.	A survey instrument was applied to 174 MBA students at a university in North-Eastern Mexico.	Gender differences were not significant for either the number of opportunities identified or the innovativeness of such opportunities.
11	Etienne, St-Jean; Maripier, T.	2011	This study aims at understanding the process by which mentoring helps novice entrepreneurs in identifying new opportunities.	Surveyed 360 novice entrepreneurs that were supported by a mentor.	Age is having a negative influence on dependent variable, whereas Management experience is having a positive effect. The results showed that mentoring positively influenced the process of opportunity recognition of novice entrepreneurs. Opportunities were discovered rather than sought; these discoveries were intentional rather than accidental. Entrepreneurs' idiosyncratic connections with others both promote and inhibit international exchange. Tie-based opportunities lead to higher quality and more valuable exchanges that are constrained in terms of geographic, psychic and linguistic distance.
12	Ellis, Paul D.	2011	Study the methods of entrepreneurial opportunity recognition.	Based on interview data collected from 41 managers.	Entrepreneurial entry is inversely related to the size of the government, and more weakly to the extent of corruption. Freedom from corruption is significantly related to entrepreneurial entry in poorer countries.
13	Aidis, R.; Estrin, S.; Mickiewicz, T.M.	2010	Explore the country-specific institutional characteristics likely to influence an individual's decision to become an entrepreneur.	Analyze country-level institutional indicators for 47 countries with working-age population survey data taken from the Global Entrepreneurship Monitor.	The results indicate that entrepreneurs possess formal knowledge to competitively scan opportunities. Prior management experience helped them to predict future trends. However, not managerial experience but rather creativity enables to see gaps to proactively predict future-oriented opportunities to fill these gaps.
14	Puhakka, V.	2010	Examine the links between intellectual capital of entrepreneurs and the strategies they use to discover business opportunities.	Questionnaire sent to 223 newly-established Finnish firms.	

15	Smith, B.; Matthews C.; Schenkel M.	2009	Examine how relative differences in the degree of opportunity <i>tacitness</i> relate to the process of opportunity identification.	Draw on archival data from the Panel of Study of Entrepreneurial Dynamics (PSED). Used descriptive statistics.	Results indicate that codified opportunities are more likely to be discovered through systematic search, whereas more tacit opportunities are more likely to be identified due to prior experience.
16	Moreno, Justo de Jorge	2008	Classify the entrepreneur's business opportunities and determine the factors that could explain them.	A survey carried out on a total of 701 firms located in Spain.	Results show that entrepreneurial opportunity identification depends on the entrepreneurs' prior experience and his level of education.
17	Singh, R.; Knox E.; Crump, M.	2008	Examine the opportunity recognition process of Black and White entrepreneurs. Test Bhavé's model of new venture creation.	Data collected through the Panel of Study of Entrepreneurial Dynamics.	Results indicate that Black Nascent Entrepreneurs were more likely to pursue externally-stimulated opportunities with significantly lower expected revenues than their white counterparts.
18	Mueller, P.	2007	Test the hypothesis whether or not entrepreneurship facilitates knowledge flows and economic growth.	Empirical research based on archival data in Germany.	The results indicate that an increase in innovative start-up activity is more effective than an increase in general entrepreneurship for economic growth.
19	Sanz- Velasco, Stefan A.	2006	The purpose is to clarify and test two conceptualisations of entrepreneurship: "opportunity discovery" and "opportunity development".	Semi-structured interviews with the founders and managing directors of 20 start-up ventures in the Swedish mobile internet industry.	The conceptualisation of opportunity development incorporates market interaction and real-life processes influenced by prior knowledge, resources, and the industrial context. Whereas, opportunity discovery is more appropriate in situations characterized by low risk.

20	Areniu, P.; DeClercq, D.	2005	The purpose was to empirically examine why networks are important in terms of individuals' recognition of opportunities.	The analyses are undertaken on a representative sample of the adult population in two countries, Belgium and Finland. This led to a total number of 3102 eligible responses in Belgium and 1434 in Finland.	Results indicate that individuals who reside in big agglomerates are more likely to perceive opportunities compared to their counterparts in rural areas. Individuals' educational level, but not their work status, positively affects the likelihood to perceive opportunities.
21	Fritsch, M.	2004	Discuss the concept of regional growth regimes and empirically illustrate the relevance of the concept. The empirical examples are entrepreneurship, entry and the performance of new businesses in East and West Germany.	Empirical research based on the data drawn from database.	The differences of the factors determining the formation of the new businesses as well as their development between the two growth regimes are immense and clearly demonstrate the relevance of the region specific factors.
22	Ardichvili, A.; Cardozo, R.; Ray, S.	2003	Propose a theory of the opportunity identification process.	Employed <i>Dubin's Theory Building</i> framework.	The study identifies entrepreneur's personality traits, social networks, and prior knowledge as antecedents of entrepreneurial alertness to business opportunities. Entrepreneurial alertness is a necessary condition for the success of the opportunity identification triad: recognition, development, and evaluation.

Source: own production

The results of our systematic review will be presented next in the following chapter.

4. Systematic Review

We have therefore identified a number of 22 relevant empirical papers that deal with various issues of opportunity recognition and the main factors influencing this process entrepreneurial in nature. All papers have the same phenomenon under investigation, but given its complexity (Ardichvili et al., 2003) there are many different perspectives that need to be studied.

In the this chapter we focus on extracting and summarizing the content of these articles, present theories and employed methodologies, and finally their results and contributions to other disciplines, including the international business.

In the following sub-chapters our effort was directed towards systematically assessing and extracting, and *narratively* summarizing the theories, methodologies and results. (Petticrew & Roberts, 2006) The outcome would provide a solid basis for discussion and formulating conclusions.

4.1. Theories

Extant international entrepreneurship literature that focuses primarily on the concept of opportunity recognition builds on the theoretical foundations of the Neo-classical view and the Austrian view on opportunity recognition. (Renko et al., 2012) The latter suggests that the market is in a state of disequilibrium allowing opportunities to occur, in contrast to the Neo-classical view. According to the Austrian view, individuals or entrepreneurs possess unique knowledge (idiosyncratic information) about the market, which allows them identify gaps and predict future trends.

Drawing from these theoretical perspectives, we can distinguish between opportunities discovered accidentally through serendipitous events or by means of systematic search.

In their paper, Ardichvili et al. (2003) focus on better understanding the opportunity identification process by applying *Dubin's Theory Building framework*. (Elwood & Lowe, 2007) Their paper builds on existing theoretical and empirical studies in the field of opportunity identification in order to build a comprehensive theory of opportunity identification and development. Although there have been many other attempts to contribute to the topic (e.g. Bhave, 1994; Sigrist, 1999; De Koning, 1999; Hills et al. ,1997; Singh, 2000), however they don't take into consideration the multi-dimensional aspect of this issue. (Hansen et al., 2011)

Ardichvili et al. (2003) adopt a cross-disciplinary approach to their theory building process. They refer to opportunity recognition, opportunity development, opportunity identification, and opportunity evaluation as the preceding phases of new business formation. Although, it can be argued that the development phase could last longer before the opportunity is actually recognized.

Also, the evaluation process could occur during the developing phase. In their paper, they build on the theoretical foundations of Kirzner (1973; 1979) who argues that opportunities already exist and only by adopting a proactive attitude, entrepreneurs would be able to recognize them. (Zahra et al., 2005; Dimitratos & Jones, 2005; Kontinen & Ojala, 2012; Ciravegna et al., 2013; Alvarez & Barney, 2007)

Ardichvili et al. (2003) also mention in their paper the element of *serendipity* which means that entrepreneurs not necessarily come across certain opportunities by means of systematic search, but rather accompanied by a series of serendipitous events.

Furthermore, Ardichvili et al. (2003) identify the factors affecting the process of opportunity identification which are: (a) entrepreneurial alertness; (b) information symmetry and prior knowledge; (c) discovery versus intentional search; (d) social networks; (e) personality traits,

including risk-taking, optimism and self efficacy, and creativity. These form the units of the theory. (Elwood & Lowe, 2007)

Based on their assessment and analysis, Ardichvili et al. (2003) come up with eight plausible propositions from the theory of opportunity identification that put emphasis on the factors outlined above. These propositions serve as suggestions for further empirical research of these factors that trigger entrepreneurial alertness and facilitates the process of entrepreneurial opportunity recognition.

Fritsch (2004) adds the geographical unit to the phenomenon, analyzing how two growth regimes East and West Germany influence the performance of new businesses in these two regions. He posits that these two regions have a certain differences in their growth regimes and bases on four arguments:

- the theory of technological regimes;
- the recognition that regions may have a specific knowledge stock that shapes innovative activity;
- theories of economic development emphasize that regional growth conditions may vary according to such factors as spatial proximity of actors, certain characteristics of these actors (e.g. product program, innovativeness) and the intensity of knowledge *spillovers*.
- theories dealing with regional innovation activity have exposed the importance of a number of further regional characteristics for growth performance, particularly with regard to entrepreneurship and innovation.

Following Fritsch (2004), Mueller (2007) examines how entrepreneurship impacts economic growth in West Germany. Mueller (2007) argues that there is a strong link between

entrepreneurial activity in a specific region and economic growth. In discovering entrepreneurial opportunities an important role plays the entrepreneurial awareness.

Arenius & DeClercq (2005) on the other hand, examine the opportunity recognition phenomenon from a network perspective. As Ciravegna et al. (2013) points out, the importance of networks for the internationalization of small and medium sized firms should not be overlooked by the international business scholars.

There are a number of theoretical and empirical papers that argue upon how networks help firms identify and explore international business opportunities (e.g. Singh, 2000; Chandra et al., 2009; Ciravegna et al. 2013; Kontinen & Ojala, 2011)

Arenius & De Clercq (2005) argue that the entrepreneurial opportunity recognition process may be influence by the entrepreneurs' "embeddedness in networks".

Similar hypotheses were formulated by Ciravegna et al. (2013). In their paper they argue that the use of networks for identification of international opportunities depends on individuals' international experience and their activeness in searching and recognizing the first international clients. Ciravegna et al. (2013) argue that prior international experience influenced the entrepreneurs to adopt a more proactive attitude towards opportunity identification.

Ellis (2011) also argues that entrepreneurs who have developed their networks are inclined to use these networks in their international search for opportunities. Along with Ellis (2011), Wang et al. (2013) posit that the use of networks affects positively firms' performance, whereas Ciravegna et al. (2013) don't link the use of networks to firm performance in terms of internationalization speed.

Sanz-Velasco (2006) focuses on the influence of prior knowledge on opportunity recognition. Prior knowledge has also been identified as an important element of creativity. (Shepherd & De Tienne, 2005) He argues that prior knowledge exists in three important areas: (1) markets; (2) ways to serve markets; and (3) customer problems. He also draws attention to the possession by entrepreneurs of *idiosyncratic information*, unique to an individual, which brings to assumption that two entrepreneurs cannot thus perceive the same opportunity. This could bring scholars closer towards understanding why some entrepreneurs and not others were able to first recognize (discover or identify) opportunities in a given context. (Venkataraman, 1997)

Similar to Sanz-Velasco (2006), Puhakka (2010) studies the relationship between intellectual capital and opportunity discovery. He discusses how prior knowledge and past managerial experiences influence entrepreneurs' perception to opportunities. Puhakka (2010) also mentions the element of *intrinsic motivation* that triggers creativity thus enabling entrepreneurs to seek new opportunities.

Smith et al. (2009) also investigate in their paper the role of prior knowledge in the opportunity recognition process. They distinguish between *tacitness* and *codification* and how these elements interfere with the aforementioned process. Thus, depending on the nature of an opportunity, tacit or codified, this may have an impact on how the opportunity is identified through systematic search or discovery. Existing similarity between tacit knowledge and idiosyncratic knowledge cannot be overlooked.

In one way or another, creativity also represents an inherent element of the opportunity recognition phenomenon. Hansen et al. (2011) argue in their paper that opportunity recognition is in itself a creative process rather than being influenced by creativity. Thus, Hansen et al., (2011) suggest a multi-dimensional examination of a creativity-based

opportunity recognition model. They build on theories proposed by Hills et al. (1999) and Lumpkin et al. (2004). Ardichvili et al. (2003) refer to creativity as one of the two personality traits of an entrepreneur and those who possess this type of trait are more likely to recognize opportunities.

Following these scholars, Gil-Pechaun et al. (2013) include in their study multiple factors such as *Skills and Competences, Attitude and Proactiveness, Creativity and Innovation, Networking, Employees and Activity*. They outline the importance of using multi-theoretical perspectives and combining multiple factors (Ardichvili et al., 2003).

In his paper, Ko (2012) draws from cognitive theory and proposes a motivation-based cognitive approach to the opportunity identification process. The cognitive perspective has been adopted by many scholars such as Baron (2006), Butler et al. (2010), De Koning (1999), Ozgen (2011), Zahra et al. (2005) who find cognition theory important in explaining how entrepreneurs “connect the dots” between their prior knowledge and the information received from the external world.

Moreno (2008) explores the endogenous and exogenous factors that influence the analysis of the entrepreneurs’ identification and development of an opportunity. They refer to entrepreneurs’ personal characteristics and traits as being endogenous factors, and their environment or context (region, sector or industry) as exogenous factors.

Related to exogenous factors, Aidis et al. (2011) explore in their paper the country-specific institutional characteristics that influence an individual’s entrepreneurial aspiration. In this paper, authors focus on three elements: (1) size of the government; (2) corruption, and; (3) “market freedom”.

This phenomenon has also been treated from other perspective such as gender (Gonzalez-Alvarez & Solis-Rodriguez, 2011; Gonzalez & Husted, 2011), race (Singh & Gibbs, 2013) and social class identity (Singh et al., 2008; Li & Gustafsson, 2012).

The methods, findings and contributions of the papers summarized herein will be presented in the next sections.

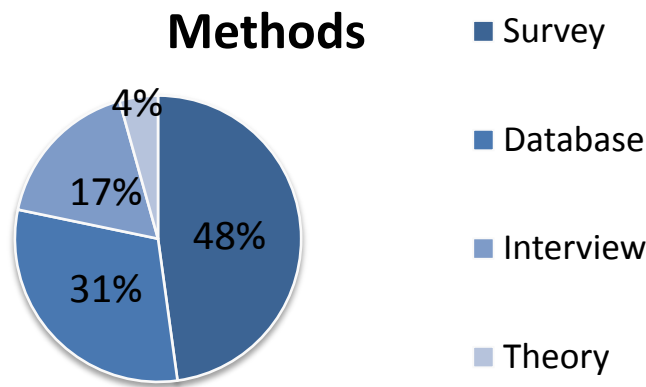
4.2. Methodology

Given that all reviewed articles were empirical in nature, the methods employed in 17 out of 23 reviewed papers were primarily quantitative methods of data collection and analysis; four papers used mixed methods, and one paper qualitative.

From the beginning, based on our judgement, we have excluded from our review case studies. Although these papers may carry empirical evidence that would seem relevant to our research, we were driven by our methodological view (see Chapter *Philosophical Reflections*) which only relies on quantifiable evidence, that is, evidence generated through exact sciences such as statistics and/or mathematics.

Almost half, 11 out of 23 reviewed papers used data collected through surveys and questionnaires, accounting for 48% of the empirical papers reviewed herein (see *Figure 3 Methodology* below). The second most employed method was data drawn from different databases, most popular being Global Entrepreneurship Monitor and Panel Study of Entrepreneurial Dynamics, as these are nationally representative. Finally, 4 out of 23 reviewed articles used data collected through interviews.

Figure 3 Methodology



Source: own production

All papers reviewed herein employed statistical methods and statistical tests except one paper that builds on existing theoretical and empirical papers using *Dubin's Theory Building* framework. (Elwood et al., 2007) According to Ardichvili et al. (2003), the first five phases of Dubin's methodology represent structural components, and the last three phases are used to conduct empirical research. They offer eight propositions that could be further developed and empirically tested.

In the majority of reviewed articles, researchers formulate hypotheses about the relationships between different variables, that is, factors and stimuli that influence, in one way or another, the opportunity recognition process. Consequently, these hypotheses are empirically tested in order to identify links and/or relationships between the different variables.

5. Findings

Major findings were identified in Ardichvili et al. (2003) who based on both theoretical and empirical evidence identify the main factors that influence the core process of opportunity identification and development, these are: (1) entrepreneurial alertness; (2) information asymmetry and prior knowledge; (3) social networks; (4) personality traits such as optimism and self-efficacy, and creativity; and (5) type of opportunity itself. Similar empirical findings can be identified in other papers as well.

This phenomenon is being tackled from different standpoints. For example, Fritsch (2004) and Mueller (2007) investigate how different growth regimes impact the entrepreneurial activity in different regions by making a comparative empirical analysis of the factors leading to new business formation in East and West Germany.

Consequently, Fritsch (2004) found out that the local conditions such as density of economic activity, the industry mix, and the region-specific stock of knowledge capital have an impact on the entrepreneurial activity in a specific region. Mueller (2007) also points out that the region-specific knowledge stock and exploitation of entrepreneurial opportunities positively impact economic growth.

Arenius & DeClercq's (2005) findings suggest that an individual's perception of opportunities may well depend on where he/she lives. Therefore, they distinguish between the importance of agglomerates and rural areas, considering the quantity and quality of information that individuals obtain while residing in one specific area. They also find a positive relationship between individual's level of education and the likelihood to recognize opportunities.

Moreno (2008) draws similar conclusions and argues that work experience, and level of education influence the way opportunities are discovered and exploited. These findings are consistent with those of Shane (2000).

After conducting their research in Finland and Belgium, Arenius & DeClercq (2005) observed through their results that Finnish respondents were more inclined towards recognizing opportunities compared to Belgian respondents. These findings indicate that there are country-specific factors influencing the perception of entrepreneurial opportunities.

Arenius & DeClercq (2005) also find out that there are certain gender differences as far as the recognition of opportunities is concerned. Their findings are consistent with those of Gonzalez-Alvarez & Solis-Rodriguez (2011). Not only are their findings consistent with regard to gender differences, but also in terms of individuals' affiliation to their social networks.

Besides gender differences, Singh et al. (2008) drew our attention towards the differences between black and white nascent entrepreneurs. They argue that black nascent entrepreneurs are more likely to respond to the motivation of first founding a firm and then search for opportunities (externally-stimulated opportunity) compared to their white counterparts who were more inclined towards developing an opportunity first (internally-stimulated opportunity). (Singh & Gibbs, 2013)

Li & Gustafsson's (2012) findings are consistent with those of Singh et al. (2008). They find out that the social class identity and prior experience affiliation of Chinese nascent entrepreneurs "have a significant impact on the innovativeness of their entrepreneurial identification." That being said, there exist pre-determined factors (Li & Gustafsson, 2012) that have an impact on the opportunity identification process. Their study could serve as a suggestion for the government or other entities that encourage and sustain entrepreneurship.

In his paper, Sanz-Velasco (2006) presents interesting findings. His findings support the idea of idiosyncratic information (Shane, 2000) where he argues that the same opportunity cannot be pursued by two different entrepreneurs. As far as three are of prior knowledge (markets, ways to serve the market, and customer problems) findings indicate that entrepreneurs focus more on ways to serve markets in terms of technology and offers rather than customer problems. After doing his research in a specific industry, the Swedish mobile internet industry, Sanz-Velasco (2006) argues therefore that the specific industry context plays in important role in opportunity discovery and development.

Following Sanz-Velasco (2006), the study of Gonzalez & Husted (2011) has shown that there is a positive effect of “specific human capital” such as prior knowledge, work experience, and prior experience of already establishing a business on the opportunity recognition process within a specific context (Mexico). They did not however find significant gender differences.

Smith et al. (2009) also touch upon the importance of *prior knowledge*. Prior knowledge has been identified as an important component of creativity. (Sanz-Velasco, 2006; Shepherd and DeTienne, 2005) In their paper, Smith et al. (2009) distinguish between tacit and codified opportunities and subsequently a typology that integrates the type of opportunity, the role of prior experience, and the entrepreneurial discovery (see *Figure 4 Tacit versus Codified opportunities*).

According to Smith et al. (2009) codified opportunities “focus on imitated or moderate improvements of products, services, raw materials, or organizing methods” whereas tacit opportunities “on major improvements or new innovations of products, services, raw materials, or organizing methods.”

Figure 4 Tacit versus Codified opportunities

		Entrepreneur's Knowledge	
		Prior Knowledge	No Prior Knowledge
Opportunity (Attribute)	Tacit	Discovery	Overlooked
	Codified	Focused Search	Systematic Search

Source: adapted from Smith et al. (2009)

Thus, without any prior knowledge codified opportunities can be identified through systematic search whereas existence of prior knowledge helps discover tacit opportunities.

Wang et al. (2013) have focused their empirical effort towards exploring the link between entrepreneurial opportunity recognition, and individual-level innovation performance. The results of their research, supporting Singh's (2000) arguments, indicate that individual's characteristics such as *self-efficacy*, prior knowledge, and social networks had a positive impact on entrepreneurial opportunity recognition.

Wang et al. (2013) argue that an entrepreneur's characteristics and personal traits alone are not enough to explain the entrepreneurial opportunity recognition process. These, however, should be studied in a specific context, that is, the external environment. Besides these factors, their findings suggest that a nation's social and cultural characteristics also influence the entrepreneurial opportunity recognition process.

In his paper, Ellis (2011) argues that a firm's international expansion which includes building exchange agreements with new partners internationally is in nature an entrepreneurial process that involves identification and exploitation of opportunities internationally. Although these opportunities are rather discovered than sought, their discovery was intentional rather than accidental. Thus, the element of serendipity was excluded. He also finds that social ties play a

more important role for entrepreneurs in relatively open economics than for those in less open economies.

Puhakka (2010) argues that entrepreneurs' "intrinsic motivation" also plays an important role in the opportunity recognition process. Besides motivation, he/she must possess formal knowledge to be able to recognize opportunities, prior experience that would help identify future trends, and creativity to "proactively predict future-oriented opportunities to fill these gaps". (Puhakka, 2010)

Somewhat similar to Puhakka (2010), Ko (2012) argues that a motivation-based cognitive approach to entrepreneurial opportunity identification (Kiss et al., 2013; McDougall & Oviatt, 2000; Zahra et al., 2004) would help better understand why some entrepreneurs are better at recognizing opportunities while others are not. (Zahra et al., 2004)

According to Ko (2012) entrepreneurs that engage in cognitive activities become more alert to external stimuli which finally trigger recognition of entrepreneurial opportunities.

He was not however the first to find the relationship between creativity and opportunity recognition. Hansen et al. (2011) for instance argue that creativity is present in every stage of the opportunity recognition process which is seen as a multidimensional construct. They assessed the relationship between creativity and the five elements of Csikszentmihalyi's (1996)-based model: Preparation, Incubation, Insight, Evaluation, and Elaboration. A significant relationship was identified between creativity and Incubation and Elaboration components. Incubation is the stage where the idea is generated and Elaboration is where the idea is reshaped into something different. In both cases creativity plays an important role. However, there were no significant relationships found between creativity and the elements Preparation, Insight, and Evaluation. These involve using knowledge rather than creativity.

Etienne & Maripier (2011) focus their study on novice entrepreneurs and the advantages of learning with a mentor. They found out that novice entrepreneurs demonstrated better abilities in identifying opportunities when assisted by a mentor. This brought to the conclusion that mentoring could be a good solution in supporting entrepreneurs that intent to engage in their entrepreneurial activity for the first time, and also during the process of development.

Gil-Pechuan et al. (2013) provide in their articles the main factors that influence international entrepreneurial activities, these are: skills and competencies, attitude and proactiveness, creativity and innovation, networking, employees and activity. In their empirical study they test the relationship between these factors and international entrepreneurship development. Findings suggest that a positive relationship exists between them. They stress on the importance of a multi-theoretical approach to the problem.

Similar to Singh (2000) and Ardichvili et al. (2003) who identify social networks one of the main factors influencing the opportunity recognition process, Wurim (2013) also argues, based on his research on opportunity recognition and entrepreneurial business formation in Central Nigeria, that social networking provides entrepreneurs with valuable information that eventually triggers entrepreneurial alertness.

The types of social networks influence the quality of information that reaches the entrepreneur. Entrepreneurial alertness combined with previous experience in a related field is “a vital aspect of the opportunity recognition process” (Wurim, 2013). In his empirical effort, Wurim (2013) finds out that entrepreneurs came across a business idea after a systematic search rather than as a consequence of serendipitous events.

On the other hand, Ciravegna et al. (2013) treat the element of serendipity differently. They tried to find out whether *proactiveness* in the search efforts for opportunities abroad

influenced the export performance. Thus, their findings illustrate that proactiveness doesn't influence the speed of internationalization but only in terms of intensity and scope. They assume that it may be caused by the intervention of serendipitous events during the process.

Another interesting finding of Ciravegna et al. (2013), similar to other researches (Wurim, 2013; Puhakka, 2010; Moreno, 2008), is that entrepreneurs' prior experience is an important factor in the process. Entrepreneurs with more prior experience are adopting a proactive approach to international opportunity identification. However, they did not necessarily use networks as the main internationalization method. This led to the conclusion that networks are not necessarily significantly associated with internationalization speed either.

In this chapter we presented our systematic analysis of 22 empirical efforts. The results of this analysis will be further used in the following chapter for the purpose of discussing the contributions of the articles for the international business.

6. Data Analysis

In our previous chapter we have systematically analyzed the 22 empirical articles under review. Empirical efforts behind these papers have drawn our attention towards the multi-dimensional (Hansen et al., 2011) and multi-theoretical aspect (Coviello & Jones, 2004) of the phenomenon of entrepreneurial opportunity recognition.

We have thus come across several valuable findings that could lead to answering our main research question: *what are the factors influencing the process of entrepreneurial opportunity recognition?*

In order to answer this question, we have grouped the factors identified in the empirical papers into three distinct sets of factors that lead to opportunity recognition. Each of these sets contains factors that are crucial for the overall process of opportunity recognition which were highlighted in the reviewed articles and also in the extant literature that covers this particular phenomenon. Our contribution herein represents a categorization of the main factors in accordance to the empirical evidence in the international entrepreneurship field gathered by means of systematic review.

Furthermore, answering this particular question would bring forth valuable contributions and suggestions for future research in both international entrepreneurship and international business disciplines.

Therefore, in this chapter we will discuss the results of our systematic review and consequently sort out the relevant factors belonging to each individual set of factors. Subsequently, we extend over to discussing the implications for the international business field and the methodological challenges encompassing the research in the *Recommendations* chapter.

6.1. Factors of Entrepreneurial Opportunity Recognition

As outlined in the introductory chapter, we consequently identified three distinctive sets or levels of factors: the first set is socio-political factors, which includes factors such as culture, government, policies that either support entrepreneurs in their effort of opportunity identification or restricts others to enter, level of corruption, and history. (Fritsch, 2004; Mueller, 2007)

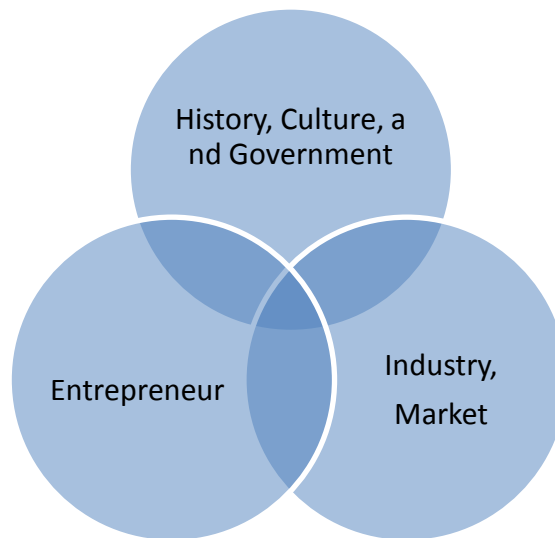
The main factors that were identified at this level are: the involvement of the governmental structures, policies, corruption, and historical background which can certainly encourage or discourage entrepreneurial activity. (Aidis et al., 2012; Fritsch, 2004; Mueller, 2007)

We can take here the example of East Germany, where the economic activity was limited by the political-economic socialist system. This eventually led to significant economic differences between the two regions East and West Germany. (Fritsch, 2004) This definitely cannot pass by unnoticed and without influencing individuals' perception of the economic environment, the industry context or the functionality of the market.

Entrepreneurial opportunities thus occur at the intersection of these three levels, when the entrepreneur guided by prior experiences and knowledge about market needs and resources, employing creativity, reaches the stage of total awareness to external stimuli.

Besides these factors, Arenius & De Clercq (2005), Singh et al. (2008), Singh & Gibbs (2013) argue in their findings that certain cultural factors such as for instance gender differences and differences in race are factors that have long influenced the outcome of entrepreneurial efforts.

Figure 5 The intersection of three levels



Source: own production

For example, Singh et al. (2005) have investigated the differences in pursuing opportunities between white and black nascent entrepreneurs or Moreno (2008) who tackles the problem from a gender perspective. These issues are embedded in our history and still persist nowadays.

The second level covers factors related to the industry- and market-specific context.

As pointed out earlier, the specific industry context and the specific knowledge within the industry or market play an important role in opportunity discovery and development of entrepreneurial opportunities. (Sanz-Velasco, 2006) Firms and the industries they operate in, dictated by the technological advances for instance, form a perfect environment for breeding different types of opportunities. This calls for a heightened entrepreneurial alertness in identifying gaps or innovate within a specific industry context.

Finally, the third set focuses on the individual or the entrepreneur. A wide range of empirical articles found focus on aspects such as *creativity* (Ardichvili et al., 2003; Puhakka, 2010), *alertness* (Ardichvili et al., 2003), *level of education* (Arenius & De Clercq, 2005; Morena, 2005), *social class identity* (Li & Gustafsson, 2012), *social networks* (Gonzalez-Rodrigues, 2011; Arenius & De Clercq, 2005; Wang et al., 2013), *prior experience* (Moreno, 2008;

Sanz-Velasco, 2006), and *prior knowledge* (Sanz-Velasco, 2006; Smith et al., 2009) which are all factors that trigger awareness and eventually determine an individual to pursue entrepreneurial opportunities.

Thus, we have identified three distinctive sets of factors that have an impact on the opportunity recognition process: socio-political, industry- and market-specific, and individual-specific factors. These will be further discussed separately below.

Socio-political factors

This set of factors focuses primarily on the socio-political conditions in a country or region. These conditions include mainly historical legacy, cultural and governmental influence. Therefore, the purpose herein is to discuss these factors and link them with the entrepreneurial opportunity recognition process.

According to Fritsch (2004) regions have different growth regimes because there are certain differences in regional technological regimes, region-specific knowledge stock, spatial proximity of actors in a specific region, and regional innovation activity. In the empirical examples of East and West Germany in the 1990s, Fritsch (2004) explained the differences of the two growth regimes based on the four arguments. He concluded that these growth regimes evolve during longer periods of time.

As in the example of East Germany where the socialist system dominated up until the 1990s and it certainly influenced the level of economic development which subsequently had an impact on entrepreneurial activity in the region. History and location, according to Fritsch (2004), are factors that influence entrepreneurial opportunity recognition and need to be considered by policy makers.

As far as location is concerned, Arenius & De Clercq (2005) brought empirical evidence that the nature of individual's residential area influences the perception of entrepreneurial opportunities, and again, because of the *region-specific knowledge spillover* and *spatial proximity* mentioned also by Fritsch (2004) and Mueller (2007).

Mueller (2007) also found a link between regional economic growth and exploitation of entrepreneurial opportunities. However, there must be created conditions for entrepreneurs who engage in their venture for the first time and for those who experienced failure. There are different policies in across regions and countries which can either encourage entrepreneurial activity or discourage.

The economic-political system in a country for instance is an important factor for entrepreneurial opportunity recognition. It is not however the purpose of this paper to discuss the different types of economic-political systems and how they evolved over time in different countries the empirical evidence from East and West Germany in the 1990s showed how these systems impact entrepreneurial activity. These systems dictate conditions of market functionality meaning how markets in different countries work and how different actors adapt to these conditions.

For instance, Aidis et al. (2010) examine the role of country-specific institutional characteristics such as the size of the government, corruption levels and "market freedom". Interestingly enough, although theoretically the size of the government could be a positive factor for entrepreneurship, through empirical efforts they found a negative relationship between size of the government and entrepreneurial entry. More extensive governmental spending is associated with higher level of taxation which is not considered an incentive for entrepreneurs.

Besides high taxes, a high level of corruption that is associated with poorer countries is also a negative factor that could influence individuals' entrepreneurial efforts. Corruption is yet another complex phenomenon that will not be discussed further in this project. Nevertheless, the impact of government, policies, and political regime in general, are factors that cannot be overlooked as far as entrepreneurship is concerned.

When reviewing empirical papers on the topic of entrepreneurial opportunity recognition in the last ten years we did not come across evidence on how culture affects this process. Notwithstanding, there are things that are deeply embedded in a specific culture that influences the way opportunities are identified.

Hofstede (1984, 2001) initially identified four national culture dimensions: *power distance*, *individualism versus collectivism*, *masculinity versus femininity*, and *uncertainty avoidance*. He later added two more: *pragmatic versus normative* and *indulgence versus restraint*. As a suggestion for future research, it would be interesting to integrate these six cultural dimensions into the entrepreneurial opportunity recognition process.

Another issue that is investigated in the entrepreneurship literature is whether men are better than women at identifying opportunities or vice versa? Gonzalez & Husted (2011) have investigated how gender affects the number of innovativeness of business opportunities identified by future entrepreneurs in Mexico. Their results indicate that gender differences were not significant for the numbers of opportunities identified.

In contrast to their findings, Gonzalez-Alvarez & Solis Rodriguez (2011) found out that in Spain men entrepreneurs discover more business opportunities than their women counterparts.

It can be argued therefore whether gender can be a factor that influences the process of opportunity recognition in any way. However, this issue is deeply embedded in cultures of other countries where women entrepreneurs don't have the same rights or limited liberty compared to their counterparts in another countries. Future research efforts should be also directed towards this issue of gender in entrepreneurship.

Besides gender differences, other scholars have directed their empirical efforts towards investigating the issue of race differences and their implications for the opportunity recognition process. Singh et al. (2008) and Singh & Gibbs (2013) investigate the opportunity recognition differences between black and white nascent entrepreneurs, whereas Li & Gustafsson (2012) investigate the differences within the social background of the Chinese nascent entrepreneurs.

Race differences seem to be considered to a certain extent as factors that influence the process of opportunity recognition. (Li & Gustafsson, 2012) Results show that there are differences between nascent entrepreneurs of different race in how they recognize business opportunities. We refer to this issue as a cultural factor affecting the opportunity recognition process and we call for more empirical evidence underlining this issue across different countries and regions.

Industry- and market-specific factors

In this section we discuss the industry- and market-specific factors. It is important here to highlight the differences that might occur between the different industries and markets, and how these influence the overall process of entrepreneurial opportunity recognition.

Kirzner (1997) defines an opportunity as an "imprecisely-defined market need, or un- or under-employed resources or capabilities". Ardichvili et al. (2003) see these "resources or

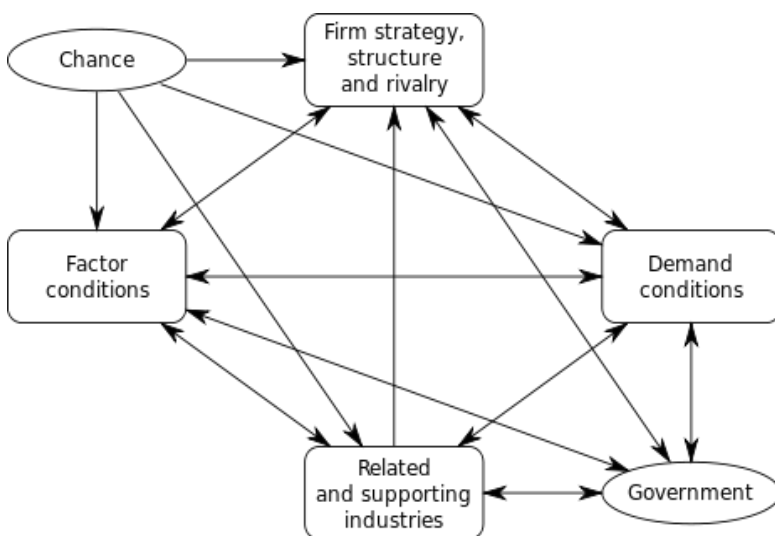
capabilities” as “basic technologies, inventions for which no market has been defined, or ideas for products of services”.

Opportunities occur within a specific industry context (Sanz-Velasco, 2006) and factors such as technological developments disrupt the market equilibrium thereby fostering competitiveness among actors. This competitiveness requires that entrepreneurs gather specific knowledge about the industries and the market in general to be able to identify gaps that others do not or cannot see, and eventually turn them into business opportunities.

Competitiveness is especially pronounced in the high technology industry under the pressure of constant changes and developments. This creates a perfect environment for entrepreneurial activity which not only means new product innovation but also the recognition of new markets and opportunities. (Wang et al., 2013)

In support of these arguments, Ozgen (2011) analyzes how industry competitiveness influences entrepreneurs synthesize and organize information and identify opportunities. His paper analyzes the cognitive framework that exists behind Porter’s diamond model (see Figure below) and how it relates to potential entrepreneurs in recognition of opportunities.

Figure 6 Porter's diamond



Source: adapted from Hollensen (2004)

Ozgen (2011) argues that competitiveness within industries “triggers an entrepreneurial mindset in recognizing opportunities.” Based on these arguments, entrepreneurs benefit from being actively engaged within a specific industry thereby being a part of the network that is formed in this context. These networks give access to valuable information that triggers entrepreneurial alertness through evaluation and critical thinking.

Industry and market specific knowledge helps entrepreneurs notice and predict future trends, and detect new opportunities within the specific industry context. For instance constantly growing demand for IT products is urging entrepreneurs to shift from traditional industries (e.g. textile industry) that tend to be more static, to knowledge based industries (e.g. IT industry) that are characterized as dynamic.

The main distinction here between static and dynamic industries is that the information within the static construction of an industry is available to all actors creating a state of equilibrium, whereas the dynamic nature of an industry is influenced by constant technological changes thereby disrupting the equilibrium that leads to more opportunities to be identified.

Firms operating within dynamic industries develop dynamic capabilities (Ozgen, 2011; Teece, Pisano & Shuen, 1997) that take into consideration the changes that happen within the context. In order to main its competitive advantage in such environment must innovate and demonstrate innovative capabilities often associated with entrepreneurship and the ability to identify new business opportunities.

According to the Austrian school of thought, the more the actors (entrepreneurial firms, entrepreneur) are involved in a systematic search within a specific industry or market and the more specific knowledge he gathers about them the more likely that the entrepreneurial senses and intuition will push towards discovery of opportunities.

Individual-specific factors

The third set of factors focuses primarily on entrepreneurs and prerequisites of entrepreneurial activity, which mainly consists of identification and exploitation of entrepreneurial opportunities.

Ko (2012) finds the definition of entrepreneurial opportunity “as a situation in which individuals develop new means-ends framework by reassembling resources that they believe will yield a profit.” We can identify in this definition four key words: individual, resources, new, and profit. Indeed, the individual or also known as the entrepreneur plays the central role that uses his knowledge to combine or re-combine resources, in an innovative way, driven by the motivation of financial reward. The latter concept was used by Shepherd & De Tienne (2005) who find it as a main motivation for aspiring novice entrepreneurs.

Focusing on the individual, the extant literature on entrepreneurial opportunity recognition focuses on answering one question: why some people and not other were able to recognize an opportunity? (Shane & Venkataraman, 2000) Some scholars argue that two entrepreneurs cannot perceive the same opportunity explaining that entrepreneurs do not possess the same information at the same time. (Ardichvili et al., 2003) Prior experiences, level of education, cognition, and creativity are factors that help answer this question.

After conducting the review, we have identified that similar factors were mentioned across a myriad of articles concerning entrepreneurial opportunity recognition. The most common factors that circulate in the literature are *entrepreneurial alertness*, *prior knowledge*, *social networks*, and *creativity*. These factors have proven their beneficial effect on the opportunity recognition process.

Ray and Cardozo (1996) define entrepreneurial alertness as “a propensity to notice and be sensitive to information about objects, incidents, and patterns of behaviour in the environment, with special sensitivity to maker and user problems, unmet needs and interests, and novel combination of resources.” Following Austrian economists, Ardichvili et al. (2003) posit that entrepreneurial alertness is associated with successful opportunity identification.

Awareness to external stimuli is not however a pre-determined factor (Li & Gustafsson, 2012) meaning that it is generated by combining personal traits and characteristics, such as creativity and self-efficacy, with prior knowledge and social networks. (Ardichvili et al., 2003; Singh, 2000; Arenius & De Clercq, 2005) Understanding the link between these factors and discovering opportunities is considered the primary task in understanding the internationalization process of the firm. (Dimitratos & Jones, 2005; Styles & Seymour, 2006; and Johanson & Vahlne, 2009)

Shane (2000) argues that prior knowledge has a stronger impact on discovery of entrepreneurial opportunities than individual traits and characteristics do, whereas Ardichvili et al. (2003) consider these factors equally important. Shane (2000) also argues that prior knowledge has an idiosyncratic character and an entrepreneur will only discover those opportunities that relate to his/her prior-knowledge. Similar findings were found in Sanz-Velasco (2006) paper where he argues that prior knowledge assists entrepreneurs in the discovery of potential business opportunities.

We can therefore assume that entrepreneurial alertness is developed gradually and its level depends on the quantity and quality of acquired knowledge. Knowledge is acquired through different ways: education, prior experience, and networks, all of which in fact positively influence the opportunity recognition process.

There are also other ways to acquire necessary knowledge and experience, and mainly through mentor assistance. (Ozgen & Baron, 2007; Etienne & Maripier, 2011) Empirical evidence has shown the beneficial effects of mentor help for novice entrepreneurs. This again depends on the size of the network and individual engagement in that network.

The role of social networks was separately tackled by many scholars who put special emphasis on this factor. (Singh, 2000; Ellis, 2011; Arenius & De Clercq, 2005)

The importance of social networks prevails nowadays with the unlimited possibilities of the Internet and technology. Although these advancements take place, there is little empirical evidence however that demonstrates to what extent the virtual social networks helps individuals in their endeavour to engage in entrepreneurial activity or whether those who use virtual social networks identify opportunities faster than those who uses traditional ways of networking.

Personality traits such as motivation, self-efficacy, and creativity play a major role as far as opportunities are concerned. (Ardichvili et al., 2003; Puhakka, 2010) Without motivation there is no thriving or willingness to pursue an opportunity.

Ko (2012) proposes a motivation-based cognitive approach in order to deepen our understanding of why some individuals are better at recognizing opportunities than others. He explains that individuals who are motivated to engage in cognitive activities will not necessarily come across an opportunity unless he/she is alert to external stimuli.

Along with Ko (2012), Zahra et al. (2004), Vaghely & Julien (2010), Baron (2006) study the role of human cognition in entrepreneurial opportunity identification. This explains how entrepreneurs use cognitive frameworks acquired through prior experiences to be able to identify changes or trends happening around him. In other words, entrepreneurs respond to

external stimuli such as for instance government policies or technological developments, and using prior knowledge to identify patterns which serve as a platform for new business ideas.

According to Baron (2006) the pattern recognition perspective integrates three other factors mentioned before such as *proactiveness*, *alertness*, and *prior knowledge of an industry or market* into one single framework.

Shepherd & DeTienne (2005) however find that potential financial reward motivated entrepreneurs to engage in search of new business opportunities. Nevertheless, motivation is indeed an important individual-specific factor, like intuition or creativity, which might lead to discovering potentially profitable business opportunities.

Motivation, intuition, and creativity are all spontaneous factors that cannot be controlled or reproduced in any way by two different individuals. Their occurrence also depends on a specific set of factors that are even more complex because of their subjective nature and therefore will not be developed further in this project.

Integrating other fields such as cognitive psychology, behavioural studies, also drawing on motivation and creativity literature, could bring clarity and explanation of their occurrence and impact on the process of opportunity recognition process in international entrepreneurship by tracing these traits over a longer period of time. This would of course bring a more comprehensive understanding of the phenomenon under investigation.

7. Recommendations

In this chapter we discuss the implications of our research for the field of international business and the methodological challenges associated with the reviewed papers that need to be taken into consideration as recommendation for the future research.

Our research effort herein is positioned at the intersection of two interrelated fields international entrepreneurship and international business. (McDougall & Oviatt, 2000) Both schools focus primarily on studying the motives underlying firm internationalization. Various theoretical perspectives and methodological approaches come to the aid of international business scholars. (Coviello & Jones, 2004) Although rich in theory, the field of International Business is yet to delimitate its boundaries. Axinn & Mathysens (2001) argue that extant theory in internationalization is not enough to explain the firm behaviour in an international context.

Chandra et al. (2009) provide a comparison of the between the Uppsala Model, the Economic and Network Perspectives in International Business. In their paper they link entrepreneurial opportunity with the mainstream internationalization theories. They argue that although the Uppsala Model does assume that identification of opportunities is important at every stage of international market involvement, it does not provide explanation of how these opportunities are identified. Similarly, Dunning's (2006) Eclectic Paradigm, and the Network view have both received criticism about highlighting the importance of business opportunities in the international market, but missing explanation underlying the process of opportunity recognition itself.

Likewise, McDougall & Oviatt (1994) through their multiple case studies (24 International New Ventures) explain that existing theories in international business such as the monopolistic advantage theory, product cycle theory, stage theory of internationalization,

oligopolistic reaction theory, or the internalization theory fail to explain the process of International New Venture formation by focusing more on the firm level rather than individual level.

Many international business and international entrepreneurship such as prominent scholars have directed their research towards integrating theories, the best from both worlds, to come up with better explanations of the phenomena regarding firm internationalization. For instance, scholars such as McDougall & Oviatt (2000), Zahra & George (2002), Coviello & Jones (2004) call for a cross-disciplinary approach to the problem, and Young et al. (2003) underline the usefulness of a comprehensive approach including transaction-cost, resource-based, and networks perspectives for the international entrepreneurship research.

We aimed at understanding whether an entrepreneurial approach would explain better how firms identify opportunities abroad and what factors lead to international opportunity recognition. By tapping into the field of International Entrepreneurship and based on the research findings of our systematic review, we reflected on how these findings could inform International Business scholars and bring suggestions for future research. Therefore, by applying a cross-disciplinary approach in our research we seek for findings in extant international entrepreneurship literature that would provide more evidence for a better understanding of the process of firm internationalization at their inception phase.

After conducting our review we have identified three distinct set of factors leading to entrepreneurial opportunity identification. These sets can be seen as distinct levels as well which are considered equally important. At their intersection opportunities occur (see *Figure 5 The intersection of three levels*). The first set refers to socio-political factors such as government policies, historical legacy, and cultural differences. The second set of factors refers to the industry and market characteristics of a country or region, the information that

circulates, and the networks formed within them. The third set puts emphasis primarily on the individual or also known as the entrepreneur in our case. All of these sets include a wide variety of influential factors ranging from government policies to entrepreneurs' intrinsic motivation to embark on a new venture.

Given the emerging importance of the area and the fact that there were few papers building on empirical evidence, it still appears that opportunity recognition remains a good niche area of research. (Crump et al., 2011) The selected time frame, which was one of the main criteria of our review, enabled us to find the latest empirical evidence in the field. These recent developments in the field of international entrepreneurship field could bring useful insights for international business scholars.

We would like to draw more attention to the factors at the individual-level (McDougall & Oviatt, 1994), especially towards examining the motivation to embark on new venture from the entrepreneurs' perspective and link it to market entry mode selection (Root, 1987; Hollensen, 2004) Perhaps focusing more on the cognitive processes would help better understand the motives underlying firm internationalization.

The extant literature in international entrepreneurship is integrating also cognitive psychology, motivation and creativity literature in order to better understand why some entrepreneurs are better than others in their entrepreneurial endeavours. This could actually better explain why some firms internationalize faster than the other. (Ciravegna et al., 2013)

As Schweizer et al. (2010) would argue that internationalization could be seen as an entrepreneurial process, through our systematic review we thus bring empirical evidence that internationalization could in fact be seen from an entrepreneurial perspective as well. Therefore, building on these arguments we examined the role of opportunity in the new business formation as a central part of this entrepreneurship process. More specifically, we

focused our efforts towards identifying factors that lead to recognition of opportunities and performance by firms adopting an entrepreneurial posture. (Balabanis & Katsikea, 2002; Huse & Gabrielsson, 2005; Ciravegna et al., 2013) We hereby argue that our research falls under the radar of International Business research.

This phenomenon should be investigated from different methodological standpoints too. Although in our research we adopted the *Analytical View* basing our arguments solely on empirical evidence in the field, it is also necessary to examine how and under what circumstances new businesses are formed from the perspective of the actor or the entrepreneur (see the *Philosophical Reflections* Chapter).

Most of the articles included in our systematic review captured data in a logical positivist manner which focused primarily on statistics and testing of hypotheses. However, as Coviello & Jones (2004) argue, a reconciliation of positivist and interpretivist methodologies would provide a better understanding of the entrepreneurial process of opportunity recognition which concerns both behavioural aspects and value-creation processes. This would provide scholars with a holistic view of the internationalization process.

Therefore, it is necessary to highlight the importance of adopting the *Systems View* (Arbnor & Bjerke, 2009) to be able to understand the process as a whole by putting emphasis on the dynamic processes within the environment or the system. The systems approach implies using a combination of both primary and secondary data sources for even a richer understanding of the phenomenon.

Our systematic review revealed the preponderance of a static nature of methodological approaches employed which focus on examining the phenomenon at a point in time, whereas a longitudinal methodology would require the study of a particular phenomenon over a longer period of time. (Coviello & Jones, 2004) The dimension of time seems to be neglected by

international entrepreneurship scholars. However, for a more comprehensive understanding of the opportunity recognition process it is necessary to take into consideration the aspect of time.

8. Conclusion and Limitations

The concept of entrepreneurial opportunity recognition is rapidly conquering ground in the field of international entrepreneurship. Although, international business scholars highlight the growing importance of the concept, it has not formed yet a central line of enquiry in the international business research.

International entrepreneurship scholars have tackled this issue from different methodological and theoretical standpoints. However, there is still uncertainty about how entrepreneurs discover opportunities in an international context and why some entrepreneurs are more successful in their international endeavours.

Thus, in order to fill this gap and provide a holistic understanding of the main factors influencing the process of firm internationalization at its inception, we have conducted a systematic review of empirical papers on opportunity recognition drawn from different areas of studies, and developed from different theoretical and methodological perspectives. By comparing their methodologies, findings and contributions, we have been able to find implications for international business research and formulate suggestions for future research into the concept of entrepreneurial opportunity recognition.

We subsequently compiled 22 empirical papers, based on the inclusion and exclusion criteria set forward by creators of knowledge who acted as interpretive agents, which best describe the current situation in the field of international entrepreneurship. It would be of course more plausible to include a wider range of articles in order to better understand the concept and provide the reader with a fuller picture.

Although the number of papers included in the review was rather limited, we still generated enough evidence to initiate a discussion and formulate conclusions that will supposedly capture scholarly attention.

Thus, our review was not intended to be exhaustive or definitive in any way due to time and resource constraints. Our intention was to rather draw attention towards the concept of opportunity recognition of international business scholars as it rapidly conquers ground in the field of international entrepreneurship. Also, as this systematic review was conducted by a single reviewer, it tends to be relatively subjective because the inclusion and exclusion criteria decisions were taken by one researcher, without a *review panel* as suggested by Tranfield et al. (2003).

Nevertheless, our paper is amongst the few that gathers empirical evidence underlying entrepreneurial opportunity recognition in an international context. Therefore, through our paper we bring contribution to the common pool of knowledge in both international entrepreneurship and international business by bringing the latest scientific findings to the table and defining the latest trends in entrepreneurship.

After conducting our review we have identified three distinct set of factors leading to entrepreneurial opportunity identification. At their intersection opportunities occur. The first set refers to socio-political factors such as government policies, historical legacy, and cultural differences. The second set of factors refers to the industry and market characteristics of a country or region, the information that circulates, and the networks formed within them. The third set puts emphasis primarily on the individual or also known as the entrepreneur in our case. All of these sets include a wide variety of influential factors ranging from government policies to entrepreneurs' intrinsic motivation to embark on a new venture.

The phenomenon of opportunity recognition could be seen from different methodological perspectives too, for instance by combining positivistic and interpretivist methodologies. We also call for studies that employ a longitudinal methodology rather than static that would take into consideration the dimension of time and study the phenomenon over a longer period of time.

Besides the methodological implications, we outline the importance of a multi-disciplinary and multi-theoretical approach by drawing from cognitive psychology, creativity and motivation literature. This would require focus more on the individual-level factors leading to identification of opportunities on an international scale.

Through our systematic review herein we call for more empirical and theory-building efforts at the intersection between opportunity recognition and international business.

9. Philosophical Reflections

The purpose of this chapter is to reflect on the overall research process, and mainly on our methodological stance and its philosophical implications respectively.

According to Arbnor & Bjerke (2009), the methodological view reflects the way a researcher perceives the reality. Methodology literature suggests that before proceeding to data collection and further analysis, it is necessary to reflect on the way we, as creators of knowledge, perceive reality. This represents the ultimate presumptions.

According to Kuada (2012) and Arbnor & Bjerke (2009) the link between the ultimate presumptions and the methodological views are the *paradigms*.

The concept of paradigm is attributed to Kuhn (1970) who argues that every area of research can be characterised by general set of understanding of what kind of phenomenon is being studied, what kind of questions are practical to ask, how researchers should construct their approach to answer their research question and how the final results should be understood (Kuada, 2012).

In their book, Arbnor & Bjerke (2009) identify six paradigms:

1. Reality as a concrete phenomenon that is conformable to law and independent of the observer;
2. Reality as a concrete determining process;
3. Reality as mutually dependent fields of information;
4. Reality as a world of symbolic discourse;
5. Reality as a social construction;
6. Reality as a manifestation of human intentionality.

These are the basic philosophical assumptions that are important for our research from the practical point of view.

Our understanding of the reality is both subjective and objective, and we cannot understand nor explain the full picture without considering both perspectives as complementary. In our case, we do not consider them as mutually exclusive and tend to adopt a pragmatic approach to our research – adopt a methodological approach that better suits our needs.

Guided by our problem formulation concerning entrepreneurial opportunity recognition, we accept both facets of reality. Therefore, we perceive opportunities as both:

- objective phenomena that exist in the nature waiting to be discovered by entrepreneurs;
- human (entrepreneur) creation given the serendipitous circumstance and implicitly the element of luck, factors that are both subjective in nature, independent from the entrepreneurs.

Not only our paradigmatic choices influence the way we identify problems, but also the various methods and techniques used for solving them. In other words, a particular methodological choice will help shape our observations about phenomena associated with opportunity recognition.

According to Arbnor & Bjerke (2009) a paradigm consists of four parts: *a conception of reality, a conception of science, and scientific ideal and ethical/aesthetical aspects.*

The conception of reality includes the researchers' philosophical thinking and ideas about the structure of reality.

The conception of science reflects the concepts, knowledge and beliefs gained through education about objects and subjects under research.

Scientific ideal reflects on the researcher as a personality and how we want to be perceived within the area of study, either as an exponent of the science as something objective or a believer of subjectivity and interaction between actors.

Ethical and aesthetical aspect is based on the researchers' morality of what is in their view suitable and what is not. (Arbnor & Bjerke, 2009, pp. 15-16)

Based on their six formulated paradigms, authors provide a classification of three different methodological approaches to knowledge creation:

- *The Analytical View*
- *The Systems View*
- *The Actor's View*

Whichever view is being adopted, it cannot be ultimately identified as right or wrong as there is no empirical or logical way to determine the best view. Furthermore, they argue that there could be more than one methodological view within a paradigm.

In the following paragraphs the three methodological approaches will be analyzed in order to identify which one suits best our enquiry, bound by our paradigmatic choices and the scope of this research. The ultimate presumptions of each view will be discussed as well.

The Analytical View

The Analytical view holds that the reality is objective and independent from the observer. Its main purpose is to explain reality that is filled with both subjective and objective facts that have a summative character. This reality can be decomposed and its parts solely analyzed, which will provide researchers with a full picture.

From an epistemological perspective, the knowledge that is created through analytical approach is based on facts and is independent from individuals' subjective experience. This constitutes the ultimate presumption underlying the analytical view.

The prerequisite of the analytical view are the “existing theories and techniques given in advance that make the rendering the verification or falsification of hypotheses possible.” (Arbnor & Bjerke, 2009, p. 57) The researches can further build on existing theory for the problem in question. This shows the cyclical nature of the analytical view, where everything starts and ends with facts.

The task of the analytical view is to discover elements of the environment that are insensible to its changes. In the analytical view logic and mathematics are indisputable, universal and valid. (Arbnor & Bjerke, 2009, p. 82) Therefore, the models in the analytical view are usually quantitatively based that reflect the invariant phenomena under investigation.

The ultimate presumptions of the analytical view will be further discussed.

Through the lens of the analytical view, the conception of business reality is that it's objective and independent from us as researchers. Both objective and subjective parts that reality consists of are *factive*. It is seen as an immutable construction with a summative character, meaning that it can be decomposed and each part of it analyzed in particular.

According to this view, the theories must be based on facts, specific terms that should be syntactically and semantically correct. All the terms should be based on logic and mathematics. (Arbnor & Bjerke, 2009)

The knowledge of business, according to the analytical view, must consist of hypothesis and already tested techniques. This knowledge is used to create more knowledge hence its cyclical nature.

Researchers who align themselves to the analytical view treat the question of *what a business creator of knowledge should do and what he should not* with indifference as long as creation of knowledge is in progress. (Arbnor & Bjerke, 2009, p. 97)

The Systems View

The theory of the Systems View is built on the idea that phenomena are seen as systems consisting of interrelated parts that are in constant interaction and form a synergistic effect. In the systems view the components of the system cannot be analyzed in isolation but placed in context. All systems have common patterns, behaviour and proprieties that can be explained and/or understood hence the descriptive and an exploratory or understanding purpose of this approach. (Arbnor & Bjerke, 2009)

As Kuada (2012, p. 52) observes, the main focus in the systems view is placed on the objective or “objectively accessible” reality.

One main distinction between the analytical approach and the systems approach is that the analytical view considers the phenomena a stable construction therefore making it highly predictable, whereas the systems view puts emphasis on the dynamic processes within the environment or the system.

The **business reality** in the case of the systems view is seen as systems filled with both subjective and objective facts. The reality in the systems view is not summative as it is in the analytical view.

As far as **the conception of science** is concerned, the systems view “implies studying the entrepreneurship reality as different wholes and patterns, where the entrepreneur is not looked as an isolated individual.” (Arbnor & Bjerke, 2009, p. 39)

The scientific ideal in the systems view puts emphasis on identifying the different wholes and patterns in order to be able to build a better picture of the system.

The ethical and aesthetic aspects refer to the use of knowledge and results which is overlooked in the systems view. It is important though from an aesthetical perspective that the content, figures, graphs and the language are not overlooked.

The Actors View

Researchers that apply the actors approach to knowledge creation have to consider two important concepts that are involved, such as improvisation and creativity. It focuses primarily on the actors, that is, the individuals. These actors are independent from the external factors and don't respond to external stimuli of the environment they are in. The chaotic context they are placed in consists of other individuals "with their own finite provinces of meaning". (Arbnor & Bjerke, 2009, p. 138)

According to Arbnor and Bjerke (2009), in the actors view the attention is drawn towards actions rather than behaviour as "action gives a person the role of an active creator of understanding, whereas behaviour gives a person a passive role as a receiver of stimuli and a generator of responses." As Kuada (2012) points out, the actors approach embraces three concepts: subjectivity, individual, and interaction.

One important tool in the actors approach is the dialogue between the observer and the individuals being observed or studied. The dialogue represents a methodological tool in the researchers' hands which enables the observer to become a participant.

From a methodological standpoint, researchers embracing the actors approach find their purpose in depicting the "inner quality" and then recreate it within themselves in order to be able to better understand certain phenomena. In the case of entrepreneurship, researchers try

to find that unique entrepreneurial quality through dialogue and attribute themselves the roles of entrepreneurs. This becomes a constant process of interpretation.

The ultimate presumption in the actors view assumes that **reality** is a social construction where the main role is attributed to the individuals and the creators of knowledge is a indispensable part of it.

The **conception of science** in the actors view is somewhat vague, because researchers adopting the actors view do not take theories for granted and “must become objects of reflection”.

The scientific ideals in the actors view are deeply embedded in the ultimate presumptions regarding the conception of reality and refer to “active interaction” that would result in constant knowledge creation that drives change.

As far as the ethical and aesthetical aspects are concerned, researchers tend to be creative and provide interpretations “which are close to being artistic”. (Arbnor & Bjerke, 2009)

After assessing the three methodological views, the next step is to decide which one of them best reflects our aspirations and will help answer the research question.

We rejected from the start the Actors view because adopting this approach requires a high degree of subjectivity and cannot be used to solve complex problems like the one investigated herein. Actors view implies that entrepreneurship is related to individuals, that is, the entrepreneurs, and they should be the central focus of the research, whereas in our research the emphasis is placed on the phenomenon of opportunity recognition and the factors leading to it.

The purpose is to explain the concept as objectively as possible, based on facts and previous research and guided by a specific methodological procedure (see *Methods* chapter), gradually

reaching the purpose of formulating plausible conclusions according to our findings, and implicitly, suggestions for future research (see *Recommendations* chapter).

As far as the methodological view is concerned, our ultimate presumptions about reality stems for both objective and subjective facts. It has a summative character - by building on others' findings about entrepreneurial opportunity recognition we will be able to see a more complete picture of the phenomenon. Therefore, in our research we adopt the Analytical View. This implies accuracy and a step-by-step methodology of knowledge creation that guarantees a valid result.

The systematic review method employed in this project was used to gather empirical evidence in the field of international entrepreneurship. By doing so, our aim was to demonstrate the usefulness of a cross-disciplinary, and a cross-theoretical approach to problem solving. This offers a holistic understanding of the phenomena being investigated.

Thus, from a methodological standpoint, we applied a positivistic approach to the phenomenon investigated herein. This approach was dictated by our chosen methodological view, The Analytical View, which stems from a summative character of reality which is filled with facts.

As creators of knowledge we aimed at building theories based on already existing theories. Although, we specify that we solely base on empirical evidence to bring pertinent explanations of the phenomena, we had also accessed secondary sources of information and articles that were qualitative in nature for even a richer understanding.

Although, in our perspective the reality is a static construction and it can be decomposed into separate parts due to its summative character, this particular phenomenon of entrepreneurial opportunity recognition cannot be understood as a whole by just decomposing and analyzing

its separate parts. It has a dynamic character that changes over time, under the influence of certain external factors. The parts are in constant interaction with each other creating a synergistic effect.

Perhaps, our methodological approach inclines more towards a combination of the Analytical View and Systems View rather than just solely relying on the Analytical View, as our project contains elements of both methodological views. As suggested in the previous chapter *Conclusion and Limitations*, a combination of positivistic and interpretivist methodologies would provide an even richer understanding of the phenomena.

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Appendices

Table 2 Summary of reviewed articles by source and year

YEAR	IJEBR	IJE	JSBM	IMDS	JAME	MD	JBR	EJM	IJGE	IEMJ	CMS	JDE	AEJ	JSBE	JEE	JBV	SBE	JIBS	IJBSS	JMR	TOTAL
2013						1	1			1				1					1		4
2012					1						1										3
2011	1			1					1				1						1		5
2010																	1			1	2
2009			1																		1
2008		1										1									2
2007																		1			1
2006	1																				1
2005								1													1
2004															1						1
2003																1					1
TOTAL	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	22

Source: Own production based on (Turcan, Marinova, & Rana, 2012)

International Journal of Entrepreneurial Behaviour & Research (IJEBR), International Journal of Entrepreneurship (IJE), Journal of Small Business Management (JSBM), Industrial Management & Data Systems (IMDS), Journal of Applied Management and Entrepreneurship (JAME), Management Decision (MD), Journal of Business Research (JBR), European Journal of Marketing (EJM), International Journal of Gender and Entrepreneurship (IJGE), International Entrepreneurship Management Journal (IEMJ), Chinese Management Studies (CMS), Journal of Developmental Entrepreneurship (JDE), Academy of Entrepreneurship Journal (AEJ), Journal of Small Business & Entrepreneurship (JSBE), Critical Perspectives on International Business (CPIB), Journal of Business Venturing (JBV), Small Business Economics (SBE), International Journal of Business and Social Science (IJBSS), Journal of International Business Studies (JIBS), Journal of Management Research (JMR).