

**Irēna Vaivode**

**ADVANCEMENT OF THE ENTREPRENEURIAL  
MINDSET AS A DRIVING FORCE FOR THE CREATION  
OF A SUCCESSFUL BORN GLOBAL STRATEGY**

Summary of the Doctoral Thesis



RIGA TECHNICAL UNIVERSITY

Faculty of Engineering Economics and Management  
Institute of Business Engineering and Management

Irēna Vaivode

Doctoral Student of the Study Programme "Management Science and Economics"

**ADVANCEMENT OF THE ENTREPRENEURIAL  
MINDSET AS A DRIVING FORCE  
FOR THE CREATION OF A SUCCESSFUL BORN  
GLOBAL STRATEGY**

Summary of the Doctoral Thesis

Scientific supervisor  
Assoc. Professor Dr. oec.  
DENISS ŠČEULOVS

RTU Press  
Riga 2021

Vaivode I. Advancement of the Entrepreneurial Mindset as a Driving Force for the Creation of a Successful Born Global Strategy. Summary of the Doctoral Thesis. - Riga: RTU Press, 2021. - 28 p.

Published in accordance with the decision of the Promotion Council "RTU P-09" of 24 September 2021, Minutes No. 04030-9.9.1/5.

NACIONĀLAIS  
ATTĪSTĪBAS  
PLĀNS 2020



EIROPAS SAVIENĪBA

Eiropas Sociālais  
fonds

---

IEGULDĪJUMS TAVĀ NĀKOTNĒ

The Doctoral Dissertation has been elaborated within European Social Fund project "Strengthening of the Academic Staff Members of Riga Technical University in Strategic Specialisation Areas" No. 8.2.2.0/18/A/017 (SAM 8.2.2.).

<https://doi.org/10.7250/9789934227226>

ISBN 978-9934-22-722-6

# DOCTORAL THESIS PROPOSED TO RIGA TECHNICAL UNIVERSITY FOR THE PROMOTION TO THE SCIENTIFIC DEGREE OF DOCTOR OF SCIENCE

To be granted the scientific degree of Doctor of Science (Ph. D.), the present Doctoral Thesis has been submitted for the defence at the open meeting of RTU Promotion Council on 14 January 2022 at 12.00 in the Zoom online platform.

## OFFICIAL REVIEWERS

Professor Dr. oec. Nataļja Lāce  
Riga Technical University

Professor Dr. oec. Jeļena Titko  
EKA University of Applied Sciences, Latvia

Professor Dr. Renata Korsakiene  
Vilnius Gediminas Technical University, Lithuania

## DECLARATION OF ACADEMIC INTEGRITY

I hereby declare that the Doctoral Thesis submitted for the review to Riga Technical University for the promotion to the scientific degree of Doctor of Science (Ph.D.) is my own. I confirm that this Doctoral Thesis had not been submitted to any other university for the promotion to a scientific degree.

Irēna Vaivode \_\_\_\_\_

Date: \_\_\_\_\_

The Doctoral Thesis has been written in English. It consists of an introduction, three chapters, conclusions and proposals, 45 figures, 46 tables, 8 appendices; the total number of pages is 150, not including appendices. The Bibliography contains 284 titles.

# TABLE OF CONTENTS

ANNOTATION.....	5
GENERAL CHARACTERISTICS OF THE DOCTORAL THESIS.....	6
GENERAL DESCRIPTION OF THE DOCTORAL THESIS.....	11
1. Entrepreneurial Mindset.....	11
2. Relationship Between Entrepreneurial Mindset and Born Global Phenomenon.....	14
3. Relationship Between Entrepreneurial Mindset and Born Global Strategy .....	16
4. Analysis of the Factors Forming the Entrepreneurial Mindset.....	17
5. Methodology for Advancement of the Entrepreneurial Mindset Leading to BG.....	23
CONCLUSIONS AND RECOMMENDATIONS.....	24
AUTHOR'S INTERNATIONAL SCIENTIFIC PUBLICATIONS ON THE THEME OF RESEARCH.....	26

## ANNOTATION

The Doctoral Thesis consists of introduction, three main chapters, conclusions and recommendations. The core text of the Doctoral Thesis outlined in 150 pages, excluding appendices and implicates 45 figures and 46 tables. The Doctoral Thesis has 8 appendices. Bibliography contains 284 reference sources.

The Doctoral Thesis is devoted to the field of entrepreneurial mindset, studying its close interaction with the process of the creation of a successful born global strategy. The 'born global' (BG) label reflects a new paradigm in the world economy; the emergence of such companies signals a more diverse global economy and contribute to national economic development by fostering innovation, creating stocks of skills and knowledge, supporting industrial growth and enabling and promoting high-value-added activities. An entrepreneur plays the central role in the formation of born global companies.

Entrepreneurial mindset is the research object of the Doctoral Thesis, it refers to a specific state of mind which orientates a human towards entrepreneurial activities and outcomes. Successful born global strategy is considered as the outcome of the dynamic process of entrepreneurial mindset.

The present Doctoral Thesis covers research on the role of the individual level characteristics of entrepreneurial mindset as basis of an actor-centric phenomenon, running internationalization process of born global companies.

The research objective of the Doctoral Thesis is to study the theoretical aspects of entrepreneurial mindset as a dynamic process and its interaction with a born global phenomenon; to develop and validate a methodology for advancement of the entrepreneurial mindset as a driving force for the creation of a successful born global strategy.

In the Chapter 1, the author has created theoretical basis for the Doctoral Thesis in order to ensure the achievement of the research objective. A theoretical analysis of the interaction between entrepreneurial mindset and the successful born global strategy has been provided. An analysis of the entrepreneurial mindset, based on the individual-level characteristics, appropriate to the BG process and related to causation and effectuation theories, is presented. Causation and effectuation theories are chosen as the theoretical basis to show the way how entrepreneurs engage in planning activities and employ born global strategies.

Empirical research in the Chapter 2 includes the description of questionnaire, ways of processing the survey results, analysis of research results by fuzzy-set qualitative comparative analysis (fsQCA) method, justification of the survey results by expert concepts. The fsQCA analysis method is used to investigate the relationship between causal conditions (harmonious passion, obsessive passion, entrepreneurial self-efficacy, and risk perception) and the outcome decision-making logic (i.e. effectuation vs. causation). Justification of the survey results by expert concepts, based on Coyle's 'six characteristics' model of the entrepreneurial mindset, is provided.

Chapter 3 is dedicated to creation and implementitation of the methodology for advancement of the entrepreneurial mindset leading to the creation of a successful born global strategy. The methodology consists of two stages: (1) methodology for evaluation of nascent entrepreneur's readiness for BG and (2) methodology for advancement of the entrepreneurial mindset leading to BG. The aim of the stage 2 is to facilitate the training of nascent entrepreneurs during the international market entry stage and to prepare to be competitive during the business growth and further maturity stages in terms of readiness for the successful BG strategy. The methodology for advancement of the entrepreneurial mindset leading to creation of the successful born global strategy is based on existing and successfully tested experience of foreign business incubators. The validation of methodology is provided in cooperation with the LIAA business incubators, mainly in collaboration with Sigulda business incubator.

Keywords: Born global company, definition of born global company, causation, competitive strategy, classical approach of strategy, effectuation, entrepreneurial mindset, market entry strategy, methodology, passion, risk perception, self-efficacy, systemic approach of strategy, training program.

# GENERAL CHARACTERISTICS OF THE DOCTORAL THESIS

## Topicality of the Doctoral Thesis

Modern trend of the entrepreneurial society increasingly urging countries to embrace entrepreneurship as an important economic engine and the major source of innovation and job creation. Small and medium-sized enterprises (SMEs) are considered to be the engines of economic growth, they play a key role in generating employment opportunities, producing value-added products, and bringing innovations to national economies. Governments around the globe promote the small and medium-sized enterprises sector to capitalize on the entrepreneurial potential of innovations and thus grow their economies. Policymakers have thus become interested in encouraging and accelerating startups' export activity in order to promote economic growth and boost job creation. These enterprises are increasingly entering international markets to exploit the potential of their innovative products and services in a larger marketplace, strive to adapt to transnational markets to compete, grow, and survive. The startup founders have increasingly adopted a global vision; as a result, the phenomenon of born global (BG) companies has arisen and challenged traditional views on internationalization in which international business for a long time was dominated by large, well-resourced multinational enterprises (MNEs). A growing number of new companies consider themselves as born global. In contrast to the path traditionally taken towards the internalisation of business – where the main focus of activities is first placed on the domestic market – these new entrepreneurs compete in the global market right from the start. They serve clients worldwide, providing new, innovative products and services and very often act as game-changers in their respective fields of expertise. This phenomenon, the importance of which is increasing, has grown rapidly in recent years and is now gaining momentum. Very often born global enterprises create a completely new market. This occurs either by developing completely new ideas or by creating market niches through the integration of existing ideas into new solutions. This strategy usually implies the readiness to take additional risks, to aim at faster growth, to deploy necessary resources, to quickly adapt to new markets and to develop advanced managerial skills.

The new born global phenomenon places strong emphasis on the individual or entrepreneur, in clear contrast to the organization, strategies, and managerial decision-making processes that characterizes the well-established multinational enterprises. These entrepreneurs represent knowledge which is shaped by the individual's prior experiences and is instrumental in the discovery and pursuit of new business opportunities. The forces of globalization present a market opportunity and a competitive challenge for new companies. Networking is viewed as a partnered learning approach for born global companies and is accessed through structures as strategic alliances or collaborative relationships between smaller firms and large foreign suppliers.

The following examples illustrate the growing importance of born globals in Europe.

**Sweden** has drawn attention to born global enterprises at government level. In 2016 the Swedish government published an export strategy that specifically emphasized the importance of encouraging born global firms. Many of the most prominent examples coming from Sweden are found in computing, e.g. Skype, Spotify, and Mojang (developer of Minecraft).

Born global companies of **Denmark** are widely discussed and is a growing phenomenon in this country.

One of the most striking examples in Europe is the **born globals of Austria**. The Austrian Federal Economic Chamber bestowed the 'Born Global Champions' award upon fledgling Austrian firms every year. 'Born Global Champions' awards to 30 recently founded Austrian firms have been presented in 2020. Austria's as small country's success in this area requires further research based on the information set out in the following brief description, thus finding a deeper understanding of the role of the entrepreneur in the process of creation and growth of born global company.

The prizes have gone to fledgling companies that have maintained a global footprint from the outset,

providing innovative products and services and achieving rapid international growth. The award winners are courageous, think big and know that the whole world is their market – and this is the secret to their success. It also indicates a readiness to take on additional risk in order to achieve quicker growth, along with the application of the requisite resources and executive skills to be able to adapt speedily to the relevant markets. All the prize winners have one thing in common: they act as game changers in their respective fields and raise the profile of Austria as a business location with their exceptional achievements as innovators. *“Austria’s Born Global Champions succeed with truly innovative products and services, a strong focus on the demands of global customers and, above all, by seizing business opportunities at impressive speed,”* writes Christoph Leitl, President of the Austrian Federal Economic Chamber.

Despite the growing importance of born global companies, understanding of how and why these firms develop and implement their internationalization strategies and what makes them successful, remains incomplete. Research works, conducted in different countries, are trying to explain both market-level (niche strategy) and firm-level (superior entrepreneurial behavior) factors which affect the emergence of this phenomenon. Research works have demonstrated that emergence of born globals may be fostered in the locations characterized by concentrated industry clustering and knowledge spillovers that offers the new ventures easier access to resources that support the internationalization process. The question arises as to whether a basis for the emergence of these type of companies could be formed in Latvia, as the current indicators of the national economy include the following trends: according to the International Monetary Fund (IMF), the unemployment rate increased to 9 % in 2020 due to the negative economic impact of the COVID-19 pandemic, and should decrease to 8 % in 2021.

Moreover, Latvia has to face a strong emigration of skilled youth. At the same time, the *Review on the Economic Development of Latvia, 2019*, of the Ministry of Economics of the Republic of Latvia, published in September 2020, states the following: *“Further economic development depends on the situation in the external environment and progress in reforms. Further development of Latvia’s economy will be still closely linked to export possibilities. Therefore, the highest risk to the growth of Latvia is linked to global economic development. Further development of the EU’s common economic space is particularly important.* (Ministry of Economics of the Republic of Latvia, 2020).

As born global companies is the still-young and little-known area for the economy of Latvia, the focus of this research is to raise interest in this phenomenon and foster policymakers to accelerate startups’ export activity in order to promote economic growth and boost job creation in Latvia.

In order to reach the formulated aim, the following **research objectives** are set:

1. To determine the role of the entrepreneurial mindset in the process of creating the born global company and application of the successful born global strategy. In order to achieve this objective, to apply generally accepted qualitative research method as monographic document analysis, based on an extensive review of the scientific literature.
2. To identify the individual level characteristics of the entrepreneurial mindset which drive entrepreneur’s decision making process. An extensive review of the scientific literature should help to achieve this aim.
3. In order to reveal the link between the entrepreneurial mindset, the BG phenomenon, and the successful BG strategies to put forward a research hypothesis based on the review of the scientific literature.
4. To conduct the empirical research for presence of the individual level characteristics of entrepreneurial mindset driving towards entrepreneurial activities and outcomes. To base this part of the Doctoral Thesis on a survey as empirical research method in which information will be obtained from nascent entrepreneurs who will have to respond to questionnaire. To apply a statistical research method for data analysis, choosing fuzzy-set qualitative comparative analysis (fsQCA) as configuration of the qualitative comparative analysis (QCA) method.
5. To develop a methodology for evaluation of nascent entrepreneur’s orientation and readiness to be BG and a methodology based on training programs for advancement of the entrepreneurial



mindset rooted approach to developing of the successful born global strategy.

6. To provide validation of newly created methodology in cooperation with business incubators, including the directors of business incubators as the experts of this process.

## The aim of the research

To study the theoretical aspects of entrepreneurial mindset as a dynamic process and its interaction with a born global phenomenon; to develop and validate a methodology for advancement of the entrepreneurial mindset as a driving force for the creation of a successful born global strategy

**The research object** is entrepreneurial mindset.

**The research subject** is the Born Global Strategy development.

## The research hypothesis

Individual level characteristics of the entrepreneurial mindset are the main factors forming a specific state of mind which directs an entrepreneur towards entrepreneurial activities and outcomes.

## Methods used in the dissertation

In order to successfully achieve the goals and meet the tasks, the author applied the generally accepted quantitative and qualitative research methods in social sciences:

- Monographic document analysis method allowed to carry out a detailed study of the research object based on extensive review of the scientific literature.
- A statistical research method. Author applied fuzzy-set qualitative comparative analysis (fsQCA) as configuration of the qualitative comparative analysis (QCA) method.
- Interview method. Expert interviews in order to ascertain the expert views on comprehension of BG phenomenon and definition, as well as the necessity to advance the entrepreneurial mindset as a driving force for the creation of the successful born global strategy.
- A survey. Empirical economic, social and governance research method in which information was obtained from approximately 800 ventures of the Baltic states. The data were obtained through the online questionnaire.

## Theoretical and methodological foundation of the Doctoral Thesis

The theoretical and methodological basis of the relevant scientific literature is used, materials of scientific conferences and seminars, the EU and LR normative documents, statistic and methodological documents of Eurostat and other international economic institutions were taken as a foundation.

## Limitations of the research

As the use of networks through long-term relationships is fundamental to BG development, the current research explores the role of the individual level characteristics of the entrepreneurial mindset as an influencing factor in their ability to build network relationships as a whole.

The five approaches to network strategies which can be broadly classified as network development and alliance-building capabilities, technology advantage, and multiple entry modes, which entrepreneurs implement simultaneously, are not studied in the current research. The abovementioned strategic approaches are: (1) personal network contacts; (2) strong relationships with large foreign customers and suppliers; (3) client followership; (4) use of advanced technology; and (5) multiple modes of entry. The study indirectly considers the identifiable differences in how culture affects interfirm network development, thus, firms require different strategies for developing and maintaining quality, long-term relationships in international market. Contextual variables such as economic conditions, culture, insti-

tutional environment and market-level variables likely influence the earliness, speed and degree with which firms can internationalize have not been separately studied.

The impact of the nature of born global firms' products or services on their short- and long-term success is not studied in this work.

The research does not investigate the external environment perspective, nevertheless a country's institutional quality affects the local business environment, competition, and firm's profitability and further orientation towards international market. The environmental uncertainty is reportedly greater in the international environment due to its instability and the interrelation of markets; the international environment favours risk taking and opportunism. Aspects of the business environment (for example, the legal system, tax system) that affect entrepreneurship in the country is not the subject of analysis of the current work. Economic freedom as a significant factor determining overall economic growth in general is considered indirectly.

## Theses for the defence

1. Presentation of the theoretical findings obtained as a result of scientific literature analysis has resulted in the research hypotheses.
2. Presentation of the results of empirical research for presence of the individual level characteristics of entrepreneurial mindset leading towards entrepreneurial activities and outcomes.
3. Presentation of the recommendations worked out for training activities to develop the individual level characteristics of entrepreneurial mindset and to improve the practical skills of entrepreneurs in terms of readiness for the successful BG strategy.

## Structure and volume of the Doctoral Thesis

The Doctoral Thesis consists of introduction, three chapters, conclusions, and recommendations. The volume of the Thesis is 164 pages, excluding appendices. The content of the Doctoral Thesis has been illustrated by 45 figures and 46 tables. The Doctoral Thesis has 2 appendices. The bibliography contains 285 reference sources. The content of the Thesis covers both theoretical and empirical study. The author has published 14 articles about the topic of the study and its results, all of them have been published in scientific journals or peer-reviewed scientific proceedings, one of the articles is cited in the scientific journal. Results of the Doctoral Thesis have been presented at 14 international scientific conferences, approbated during research and study process.

## The main scientific contributions and novelty of the Doctoral Thesis

1. Relationship between entrepreneurial mindset, born global phenomenon and born global strategy has been found by exploring the theoretical aspects of entrepreneurial mindset as a dynamic process.
2. A new version of common understanding of the BG definition has been developed including qualitative dimensions.
3. Results indicating the existence of necessary conditions and sufficient conditions of individual level characteristics of entrepreneurial mindset for the presence of causation and effectuation are obtained using the fuzzy-set qualitative comparative analysis (fsQCA) method, which was adapted as a tool of analysis in the field of the entrepreneurial mindset studies for the first time.
4. Results obtained by studying the presence of individual level characteristics of entrepreneurial mindset for nascent entrepreneurs by the fsQCA method have served as a basis for the development of a scientifically based methodology for advancement of the entrepreneurial mindset leading to BG.

## Practical Contribution and Key Benefits of the Doctoral Thesis

- A methodology for advancement of the entrepreneurial mindset leading to BG has been developed.
- The newly developed methodology consists of two parts: (1) methodology for evaluation of nascent entrepreneur's readiness for BG and (2) methodology for advancement of the entrepreneurial mindset leading to creation of successful BG strategy.

## Validation of the developed methodology

The methodology for evaluation of nascent entrepreneur's readiness for BG was validated in LIAA Sigulda business incubator (administered by LIAA). The management of the Sigulda business incubator acknowledged that the methodology set up for the assessment of business incubator entrants helped them to choose the more advanced companies for inclusion in the business incubator.

A kind of 'pilot project' of the worked out methodology for advancement of the entrepreneurial mindset as a driving force for the creation of a successful BG strategy was validated. After workshops, seminars and programs of individual mentoring and coaching to encourage entrepreneurs think differently and approach problems from a range of different angles, a task was set for the mid-term evaluation of the training results. The results showed that working alongside other entrepreneurs in the business incubators and mutual contacts can make major contribution to entrepreneurs' growth and guidance to strategic partnerships. Participants of the training program were tasked with developing and presenting their business models.

# GENERAL DESCRIPTION OF THE DOCTORAL THESIS

## 1. Entrepreneurial Mindset

In order to understand the concept of the entrepreneurial mindset and to form the opinion on the concept, the author of the Doctoral Thesis has performed a systematic literature analysis as a method to carry out the detailed study on the research object, based on extensive review of the scientific literature exploring interrelated concepts from different fields of science.

The term *entrepreneurial mindset* has often been used since the 2000s to describe certain qualities of a person engaged in business. During the last two decades scientists have their research on the entrepreneurial mindset (EM) in search of answers to questions such as why some people identify opportunities and others do not, and doing so, how they are able to leverage and combine existing and new resources in an innovative way given dynamic and complex environments.

The EM definitions (see Table 1.1) existing in the scientific and special literature are similar to each other. All the definitions characterize the abilities of individuals to think, reason, make decisions, plan and set goals to be dynamic, flexible and self-regulating in the cognition of the dynamic and uncertain task environment.

Table 1.1

**The Evolution of Definitions of the Entrepreneurial Mindset in Chronological Order of Their Creation** (developed by author, based on scientific literature sources)

Author, year	Definition of entrepreneurial mindset
McGrath and MacMillian (2000)	Ability to sense, act, and mobilize under uncertain conditions
Ireland, Hitt, and Sirmon (2001)	Way of thinking about business that focuses on and captures benefits of uncertainty; growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation, and renewal
Haynie and Shepherd (2007)	Ability to adapt thinking process to a changing context and task demands
Dhliwayo and Van Vuuren (2007)	Way of thinking and acting about business
Haynie <i>et al.</i> (2010)	The individual's ability to be dynamic, flexible and self-regulating in the cognition of the dynamic and uncertain task environment
Shepherd, Patzelt, and Haynie (2010)	Ability and willingness of individuals to rapidly sense, act, and mobilize in response to a judgmental decision under uncertainty about a possible opportunity for gain
Baron (2014)	Think, reason, make decisions, plan and set goals in relatively unique way
Davis, Hall, and Mayer (2016)	Constellation of motives, skills, and thought processes that distinguish entrepreneurs from non-entrepreneurs
McMullen and Kier (2016)	Ability to identify and exploit opportunities without regard to the resources currently under their control; only working when entrepreneurs experience a promotion focus
Nabi <i>et al.</i> (2017)	A feeling or tendency to provide a critical and creative thinking ability
Lindberg <i>et al.</i> (2017)	Acquaintance with individual behaviour and entrepreneurial activities
Naumann (2017)	A way of adaptable thinking and decision-making in complex, uncertain and dynamic environments

The entrepreneurial mindset has the following common features:

- it indicates a way of thinking about business and its opportunities that capture the benefits of uncertainty;
- it portrays the innovative and energetic search for opportunities and facilitates actions aimed at exploiting opportunities;
- it refers to an individual having the ability to identify opportunities, develop new ideas and discover new ways of looking at opportunities and problems and creative ways of solving them;
- a person's entrepreneurial mind is, therefore, associated with being both creative and innovative;
- having an entrepreneurial mindset is both an individualistic and collective asset, which is important to individual entrepreneurs as well as to managers and employees in their firms;
- the search for opportunities is, therefore, a critical task for an entrepreneur;
- the mindset of entrepreneurship comprises individual behaviour and entrepreneurial activities.

The author considers that it is important to mention the following findings of researchers in the context of the individual level characteristics of entrepreneurial mindset (see Table 1.2):

- there are differences in the ways entrepreneurs use networking and how effectuation might inform these behaviours;
- an individual's abilities to make optimal or, at least, satisfactory decisions are limited by the cognitive limitations of their minds, environmental conditions of information isotropy, and the lack of resources;
- the psychological antecedents of causation and effectuation logics consist of certain prominent individual-level variables; these variables are passion, entrepreneurial self-efficacy, and risk perceptions; they affect a variety of entrepreneurial outcomes how individuals orient to situations and decide how to pursue goals based on beliefs;
- individual-level variables are psychological constructs that are central to understanding of entrepreneurial drive and behaviour and, by extension, entrepreneurial decision-making.

As summary and a modern generalization of the above definitions, the dynamic approach of Dr. Alain Fayolle, published in the Financial Times in 2012 (Financial Times, March 1, 2012), is chosen; it provides definition of EM as a specific state of mind, which orientates human conduct toward entrepreneurial activities and outcomes. Dr. Favole has also noted that exactly individuals with entrepreneurial mindsets are often drawn to opportunities, innovations and new value creation. One can agree with the author that the entrepreneurial mindset is a dynamic process with relevant activities and results.

Description of Individual-level Characteristics of Entrepreneurial Mindset<sup>1</sup>

Individual-level characteristics of the entrepreneurial mindset	Description of characteristics
Passion	Intense, positive feeling toward venture activities, motivational force, which derives from the evaluation of the future venture outcome as highly significant for the entrepreneur's well-being, supposed to guide the entrepreneur toward achieving the highly significant venture outcome; two types of passion are taken into account: harmonious and obsessive passion
Harmonious passion	Lets to derive pleasure from business activity; entrepreneurs are characterized by process-focused motivation; they have a sense of control over their venture activity; they are flexible in their goal pursuit, open to new experiences and experimentation, more likely to embrace the unexpected in their decision-making, work together with internal and external partners to develop the venture
Obsessive passion	Feature of interpersonal or intra-personal pressures such as boosting self-esteem or feeling socially accepted or superior; ability more likely to be goal driven and plan and envision desired entrepreneurial outcomes, rigidly to follow initial goals until they are achieved; ability to be competitor oriented and focus on beating rivals or try to prevent failure relative to others
Self-efficacy	Ability to successfully attain goals associated with the new venture; the appropriate level of confidence required for entrepreneurs to expect success in attaining the venture's goals; focus on the future and visualization of success scenarios that guide the actions; focus on opportunities in the environment and on the expected; setting of the clear, challenging goals, monitoring themselves, spending considerable effort in goal attainment
Risk perception	Use of a non-predictive decision-making logic, where the focus is on managing the process rather than outcomes; perceiving the environment as risky push the venture forward in small steps while considering how the context will develop, and seek support and pre-commitments from partners to counter this risk

This dynamic approach (see Fig. 1.1) will be used as a basis for further analysis of entrepreneurial activities and expected outcomes/outputs that is the result of EM.

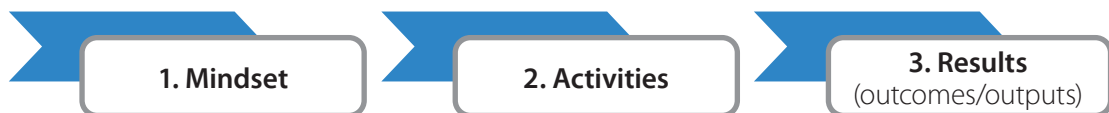


Fig. 1.1. The dynamics of the entrepreneurial mindset (developed by the author based on Dr. Alain Fayolle, 2012).

Based on this dynamic approach, the relationship between entrepreneurial mindset and born global phenomenon was explored in the course of further research.

<sup>1</sup> Based on Bandura, 1991; Sitkin, Weingart, 1995; Chen et al., 1998; Pham, Taylor, 1999; Ryan, Deci, 2000; Hodgins, Knee, 2002; Vallerand et al., 2003; Luszczynska et al., 2005; Cardon et al., 2005, 2009; Vallerand et al., 2007; Sarasvathy, 2008; Sarasvathy, Dew, 2008; Read et al., 2009; Lafrenière et al., 2011; Stroe et al., 2018.

## 2. Relationship Between Entrepreneurial Mindset and Born Global Phenomenon

To better understand this relationship, one has to start with the history of born global (BG) phenomenon. The author divided the development of theoretical basis of BG into three stages which are presented in Fig. 2.1. In each new stage, as the theoretical base develops, more and more new factors that characterize BGs have been added, theories have evolved with the development of BG phenomenon.

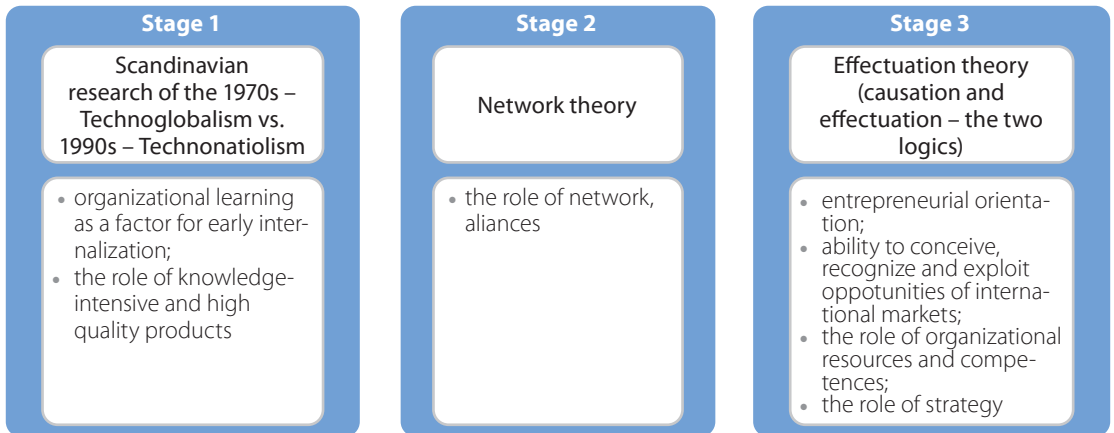


Fig. 2.1. The main BG theories, their formation through different research stages (developed by the author).

The explanation of components included in Fig. 2.1 is as follows:

### Stage 1

Scandinavian research of the 1970s is the starting point for the BG investigation. Technoglobalism vs. technonationalism of the 1990s is a starting point of the opinion about the role of technology in the corporate push to globalization: it is emphasized that knowledge-intensive products, high-technology products, high-value products, and high-quality products foster early internationalization. During this period, an opinion emerged that organizational learning is an enhancing factor of early internationalization which positively influences international performance of BGs.

### Stage 2

This stage is mainly characterized by the arising of networks' theory of the 1990s, which emphasizes the role of networks and alliances in small firm internationalization, focuses on the role of network relationships, alliances, and other social capital in BG internationalization and international performance.

### Stage 3

This stage of the contemporary causation and effectuation theories includes focus on the entrepreneurial orientation as a potential antecedent to early internationalization and founder's characteristics, which strongly affect internationalization of new firms from inception, explained in detail by the effectuation theory managers' ability to conceive, recognize, and exploit opportunities in the international markets; dynamic capabilities as a key factor that supports early internationalization.

The described above has the most direct relationship to activities of entrepreneur that possesses a certain set of individual characteristics.

Many researchers already in slightly earlier studies have found that a born global can emerge only with the help of an **entrepreneur** who possesses a certain set of individual features. In turn, the BG **enterprise** has certain features which indicate to the 'born global phenomenon' (see Table 2.1).

**Individual Features of a Born Global Entrepreneur and Main Features of the 'Born Global Phenomenon'<sup>2</sup>**

Characteristics of the BG entrepreneur	Main features of the BG enterprise
<p>Global entrepreneur:  an individual with strong achievement motivation;  strong internal focus of control, risk-taking propensity;  less risk averse, adaptable and willing to change;  proactive personality with a global orientation;  sets targets and strives to meet these targets;  experiences less psychic distance to foreign markets because he/she travels more;  more educated and more proficient in foreign languages.</p>	<p>Companies with an international focus; international growth is the company's main priority. These companies are highly active in the international markets from or near their foundation.  They possess limited financial and tangible resources.  The companies serve clients worldwide, providing new, innovative products and services; specialized and customized products are getting more popular and give them a competitive advantage over large multinational firms.  They often create completely new markets or create niches in the market by combining existing ideas with new solutions; niche markets bring more possibilities for born globals.  Born globals represent different industries and act as game-changers in their respective fields of expertise.  Exporting is the most popular way of early international expansion, as it allows to stay flexible, enter or withdraw a new international market relatively easy.  Modern information and communication technologies help born globals in the process of early internationalization.  They are usually ready to take additional risks.  They develop advanced managerial skills, their managers have a strong international outlook and international entrepreneurial orientation.</p>

There is an obvious connection between the features of an entrepreneur and features of a BG company. For example, an entrepreneur with a strong internal focus of control, risk-taking propensity, proactive personality and global orientation could be able to establish a highly active company in the international markets from or near its foundation, to create completely new markets, introduce new ideas, successfully create new niches in the market by combining existing ideas with new solutions.

Causation and effectuation theories are used as a theoretical basis to substantiate the relationship between BG and features of the entrepreneurial mindset. These theories describe aspects which lead the entrepreneurs approach to decision-making strategy.

The basic idea of causation as the strategic decision-making logic is the particular target effect and effectuation as positively affecting new venture performance in four ways:

- formulation of the goals based on experimentation;
- application of affordable loss principle helps to control the risk and to make good use of limited resources;
- application of flexibility helps to leverage contingencies in uncertain environment and use existing resources in creative combinations;
- partnerships enable companies to control the future and eliminate uncertainties.

As researchers have discovered, experienced entrepreneurs apply effectuation rather than causation in their early internationalization efforts, based on the effectual *decision-making logic*, which includes the following features that justify why entrepreneurs apply effectuation rather than causation in their early internationalization efforts:

- non-predictive logic, which focuses on rearranging the problem space and restructuring current

<sup>2</sup> Based on Loane *et al.* 2008; Paweta, 2013; Rennie, 1993; Moen 2002; Persinger *et al.* 2007; Gabrielsson *et al.*, 2008; Paweta, 2013; Advantage Austria, 2019; Ferguson *et al.*, 2021.



realities into new opportunities;

- has been applied in different fields of entrepreneurship and has been studied by many authors;
- is not positioned as a 'better' logic of reasoning but as being more applicable in situations of uncertainty and when dealing with spheres of human action;
- effectuation processes take a set of means as given and focus on selecting between possible effects that can be created with that set of means.

The development of the successful BG strategy is also based on the principles of causation and effectuation decision making logics.

### 3. Relationship Between Entrepreneurial Mindset and Born Global Strategy

A niche can be seen as a 'specific market segment' and firms can choose to produce a single market offering targeted to a specific market segment (i.e. a niche strategy). Niches are, therefore, not static but can constantly be developed by identifying new needs of potential customers, needs that are currently not being satisfied by other market offerings.

Niche strategy allows the small player to avoid head-to-head competition with larger, broadly-based firms that tend to target mass markets. Success of specialized areas called 'niches' is based first of all on the path of introduction of novelties.

Networks play the key role in supporting the niche strategy, the networks is a device that internationalizing firms use.

Figure 3.1 reflects the networking as the driving force for the niche strategy, which brings new knowledge and operates as an integral part of the internationalization process.

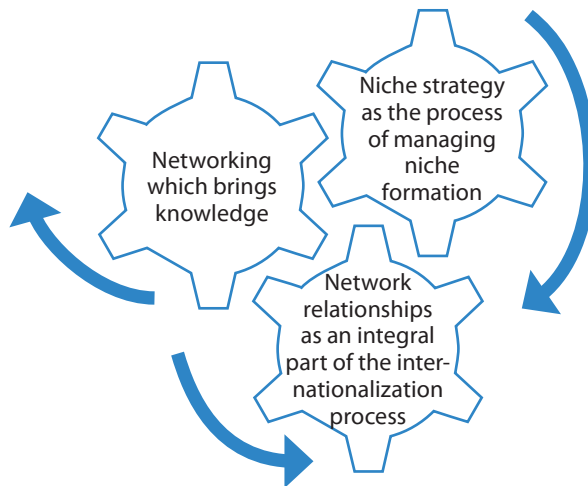


Fig. 3.1. The key role of networks in supporting the niche strategy (developed by the author).

Figure 3.2 shows the relationship between two key network elements: network relationships as an integral part of the internationalization process and networking which brings knowledge, it also highlights the main features that characterize each of these two key network elements. It could be considered as the basis of the relationship between entrepreneurial mindset and born global strategy.

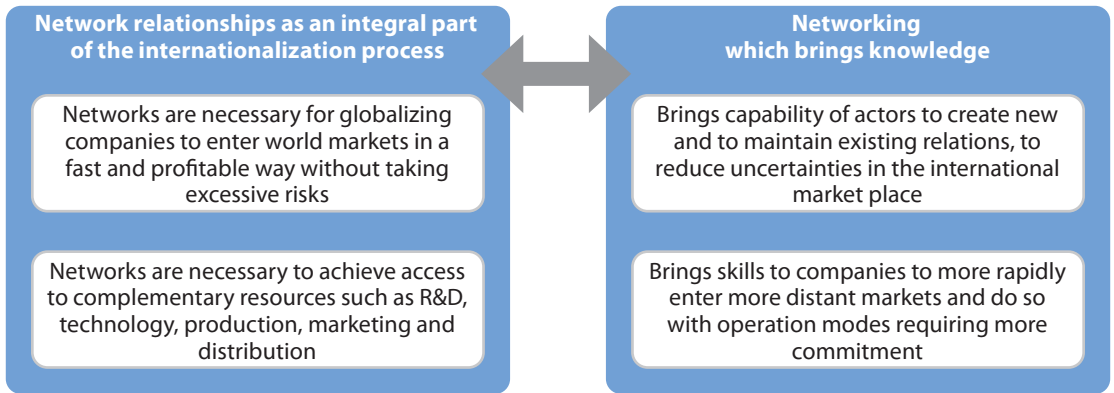


Fig. 3.2. The relationship between the two key network elements (developed by the author).

Entrepreneurial mindset plays a vital role in the process of building business networks and is very closely related to the promotion of opportunity creation in the following ways:

- entrepreneurial mindset indicates a way of thinking about business and its opportunities that captures the benefits of uncertainty;
- it portrays the innovative and energetic search for opportunities and facilitates actions aimed at exploiting opportunities;
- refers to an individual having the ability to identify opportunities, develop new ideas and discover new ways of looking at opportunities and problems and creative ways of solving them.

The entrepreneurial recognition of opportunities is a resource in itself because if entrepreneurs possess a ‘unique mindset’ with specific cognitive processes, this would form a source for competitive advantage, as the cognitive abilities of entrepreneurs help them to identify opportunities and plan resources for the firm. There are differences in the ways entrepreneurs identify opportunities and plan resources for the firm. The author’s assumption that the psychological antecedents of causation and effectuation logics consisting of certain prominent individual-level characteristics (see Table 1.2) are the factors forming the ways how entrepreneurs identify opportunities and plan resources for the firm. Here the author comes to the research hypothesis, which has to be studied in the course of further research.

## 4. Analysis of the Factors Forming the Entrepreneurial Mindset

To prove the research hypothesis put forward in relation to individual level characteristics of the entrepreneurial mindset as the main factor forming the entrepreneurial mindset, the survey was chosen as a data collection tool. The sample included three groups of respondents: the start-up companies from Baltic states as a potential early orientation to international born global; the gazelle – Latvia’s fast-growing companies. In addition, the author of the Doctoral Thesis decided to seek the views of the group of Austrian entrepreneurs – owners of companies – born global champions. Online survey was chosen as a medium to complete the survey.

- The data have been gathered according to the recommendations of Interreg Baltic Sea Region project “Smart-up accelerator”; LIAA Magnetic Latvia Startup database has been used as well as Start-up databases of Lithuania and Estonia. The research period included years 2018 and 2019. Entrepreneurs from approximately 800 ventures in total were contacted through e-mail and invited to complete the online survey. The response rate was 20 %. Data were collected via an on-line survey of founders of companies who had been closely involved in their business development trajectory. The

open-ended and mixed type questions were used, so that the answers can be applied for further analysis.

- The methodology for data analysis included Likert scale as the data analysis tool (answers to the questions were scored at 5 levels), and fuzzy-set qualitative comparative analysis (fsQCA) scale that ranged from 1 (completely disagree) to 5 (completely agree). Qualitative Comparative Analysis (QCA), developed by Charles Ragin in 1987, as a method of comparative nature geared toward multiple case studies in a small- or medium-N research design. QCA involves the link between quantitative and qualitative data analysis methods. Necessary conditions (individual characteristics of the entrepreneurial mindset) for the presence of causation and effectuation is the dependent variable, which was tested during the current research. Presence of causation and effectuation is the independent variable.
- Nine blocks of questions covered general information about the company and the explored entrepreneurs' attitude towards internationalization, as well as the sample items of causation and effectuation relevant individual characteristics of the entrepreneurial mindset (see Table 4.1).

Table 4.1

**Justification of Questionnaire (developed by author)**

The block of questions	Description of the block	Justification/theoretical background
Block 1 – three questions	General questions about the company	Eurostat, 2018; Paragon, 2019; OECD, 2019
Block 2 – three questions	Exploration of entrepreneurs' attitude towards international experience and internationalization	Erramilli, 1991; Williams, 2008; Moberg and Stenberg, 2012; Nasiri and Hamelin, 2018; Asli, 2018
Block 3 – two questions	Sample items of causation research	Sarasvathy, 2001; Read & Sarasvathy, 2005; Sarasvathy & Dew, 2005; Wiltbank <i>et al.</i> , 2006; Stroe <i>et al.</i> 2018
Block 4 – two questions	Sample items for flexibility and experimentation	Jones and Coviello 2005; Schweizer <i>et al.</i> 2010; Chandler <i>et al.</i> 2011; Galkina, <i>et al.</i> 2017; Stroe <i>et al.</i> 2018
Block 5 – two questions	Sample items for harmonious passion	Pham & Taylor, 1999; Ryan & Deci, 2000; Hodgins & Knee, 2002; Cardon <i>et al.</i> , 2005; Vallerand <i>et al.</i> , 2010; Lafrenière <i>et al.</i> 2011; Stroe <i>et al.</i> 2018
Block 6 – two questions	Sample items measuring obsessive passion	Vallerand <i>et al.</i> , 2003; Cardon <i>et al.</i> , 2009; Lafrenière <i>et al.</i> , 2011; Stroe <i>et al.</i> 2018
Block 7 – one question	Sample items for entrepreneurial self-efficacy indication	Bandura, 1991; Boyd & Vozikis, 1994; Chen <i>et al.</i> , 1998; Luszczynska <i>et al.</i> 2005; Sarasvathy & Dew, 2008; Stroe <i>et al.</i> 2018
Block 8 – one question	Sample items for risk perception	Ghosh & Ray, 1992; Krueger & Dickson, 1994; Sarasvathy, 2008; Read <i>et al.</i> , 2009; Stroe <i>et al.</i> 2018
Block 9 – four questions	Sample items related to the necessity and existence of practical skills for expansion in international markets	Zahra <i>et al.</i> , 2003; Rialp & Rialp, 2006; Zhou <i>et al.</i> 2007; Berends <i>et al.</i> , 2014; Reymen <i>et al.</i> , 2015; Galkina & Lundgren-Henriksson, 2017
Two concluding questions	The period of operation on the domestic market until internationalization and listing of the main barriers for entering international markets	McKinsey & Company, 1993; Rennie, 1993; Karakaya, 1993; McDougall <i>et al.</i> , 2003; Berends <i>et al.</i> , 2014; Reymen <i>et al.</i> , 2015; Advantage Austria, 2018

Before sending the questionnaire to the respondents, it was tested in an expert group of 9 people in the period from 12 to 15 February 2019. The focus group discussion on ways of understanding of the

BG concept was attended by 9 people who are the experts in the field of entrepreneurship with focus on SME. The age of focus group members is from 26 to 58, of both genders. In order to confirm the reliability of the issues included in the survey questions, the focus group methodology was chosen. The focus group members were offered 6 discussion questions on the BG concept and features of BG. The discussion lasted 1.5 hours.

The expert discussion was prompted by the question of why sample items of causation research are highlighted in relation with sample items of individual level characteristics of entrepreneurial mindset. The participants of the discussion were introduced to the essence of the fuzzy-set qualitative comparative analysis (fsQCA) method that will be used for data analysis as a result of the discussion; the decision of the expert group about the questionnaire was affirmative. After the focus group discussion and before sending the questionnaire to the sample of respondents, it was tested in a test group of 20 people over a period of time from 25 March to 12 April of 2019.

**Analysis of the research results by fsQCA method**

The analysis of *necessary conditions* for the presence of causation and effectuation using fsQCA method (measures, key findings) is the first step of analysis. Tables 4.2 and 4.3 present the results of analysis of necessary conditions, based on the fuzzy-set qualitative comparative analysis (fsQCA), a set-theoretic analysis method which closely examines how configurations of causal conditions contribute to a specific outcome in the context of the current study. An initial round of analysis was conducted to evaluate whether the causal conditions were necessary for the outcome to occur (analysis of necessity). A necessary condition implies that the outcome is not present unless the condition is also present. When the outcome is observed, the condition will always be observed. But if the condition is observed, the outcome may or may not be observed. In set-theoretic terms, a condition is necessary if for all observations the membership values of the condition exceed the membership value of the outcome. As is customary in fsQCA analysis, the assessment of causal necessity was based on a consistency threshold of 1. No causal condition was necessary for either causation or effectuation because the consistency score did not exceed the threshold of 1 for any condition. Therefore, the results of the analysis of necessity do not support any of the propositions.

Table 4.2

**Analysis of Necessary Conditions for the Presence of Causation and Effectuation (developed by the author) (LV)**

Conditions	Outcome			
	Causation		Effectuation	
	Consistency	Coverage	Consistency	Coverage
Harmonious passion	1	0.476821	1	0.5
~Harmonious passion	1	0.5	0.902778	0.656566
Obsessive passion	1	0.476821	1	0.5
~ Obsessive passion	0.986111	0.493056	0.888889	0.646465
Self-efficacy	0.987179	0.509934	1	0.541667
~ Self-efficacy	0.987179	0.534722	0.897436	0.707071
Risk perception	0.986301	0.476821	1	0.506944
~ Risk perception	0.986301	0.5	0.90411	0.666667

Tables 4.2 and 4.3 present the results of necessary conditions analysis for the causation and effectuation. Designations (LV) and (EN) in Tables 4.2. and 4.3 mean the use of respondents’ survey responses in one of these languages. This type of grouping has been kept due to fsQCA concept as analysis for small-*n* studies.

**Analysis of Necessary Conditions for the Presence of Causation and Effectuation**  
(developed by the author) (EN)

Conditions	Outcome			
	Causation		Effectuation	
	Consistency	Coverage	Consistency	Coverage
Harmonious passion	0.982759	0.558824	1	0.471545
~Harmonious passion	1	0.527273	0.982759	0.606383
Obsessive passion	0.981132	0.509804	1	0.430894
~ Obsessive passion	1	0.481818	1	0.56383
Self-efficacy	0.983051	0.568627	1	0.479675
~ Self-efficacy	1	0.536364	0.966102	0.606383
Risk perception	0.982143	0.539216	1	0.455285
~ Risk perception	1	0.509091	1	0.595745

A sufficient condition implies that the outcome will be present whenever the condition is present. When the condition is absent, the outcome may still be present. Technically, a condition is sufficient if for all observations the membership value of the condition is lower than the membership value of the outcome.

### Analysis of sufficiency

Tables 4.4 and 4.5 present the scores of the sufficient condition for the presence of causation and effectuation. Designations (LV) and (EN) in Tables 4.4 and 4.5 mean the use of respondents' answers that belong to one particular group. This type of grouping has been kept due to fsQCA concept of analysis for small-n studies. Results of the research reflected in Tables 4.4 and 4.5 indicate a sufficient level of features to use causal and effectual decision-making logic to entrepreneurs. Mediocre results of coverage scores for all of the cases reflect the necessity in better empirical explanation of the outcomes and necessity of better understanding of causal and effectual decision-making logic to entrepreneurs.

**Analysis of Sufficient Conditions for the Presence of Causation and Effectuation**  
(developed by the author) (LV)

Conditions	Outcome			
	Causation		Effectuation	
	IA	IIA	IB	IIB
<b>Harmonious passion</b>	●	●	●	●
Consistency	1	1	1	0.9
Raw coverage	0.48	0.5	0.5	0.66
Unique coverage	0.48	0.5	0.5	0.66
Overall solution consistency	1	1	1	0.9
Overall solution coverage	0.48	0.5	0.5	0.66
<b>Obsessive passion</b>	●	●	●	●
Consistency	1	0.99	1	0.89
Raw coverage	0.48	0.49	0.5	0.65
Unique coverage	0.48	0.49	0.5	0.65
Overall solution consistency	1	0.99	1	0.89
Overall solution coverage	0.48	0.5	0.5	0.65
<b>Self-efficacy</b>	●	●	●	●
Consistency	0.99	0.99	1	0.9
Raw coverage	0.51	0.53	0.54	0.71
Unique coverage	0.51	0.53	0.54	0.71
Overall solution consistency	0.99	0.99	1	0.9
Overall solution coverage	0.51	0.53	0.54	0.71
<b>Risk perception</b>	●	●	●	●
Consistency	0.99	0.99	1	0.9
Raw coverage	0.48	0.5	0.51	0.67
Unique coverage	0.48	0.5	0.51	0.67
Overall solution consistency	0.99	0.99	1	0.9
Overall solution coverage	0.48	0.5	0.51	0.67

Table 4.5

**Analysis of Sufficient Conditions for the Presence of Causation and Effectuation**  
(developed by the author) (EN)

Conditions	Outcome			
	Causation		Effectuation	
	IA	IIA	IB	IIB
<b>Harmonious passion</b>	●/○	●/○	●	●
Consistency	0.98	1	1	0.98
Raw coverage	0.56	0.53	0.47	0.61
Unique coverage	0.56	0.53	0.47	0.61
Overall solution consistency	0.56	0.53	0.47	0.61
Overall solution coverage	0.98	1	1	0.98
<b>Obsessive passion</b>	●	●	●	●
Consistency	0.98	1	1	0.98
Raw coverage	0.51	0.48	0.43	0.57
Unique coverage	0.51	0.48	0.43	0.57
Overall solution consistency	0.98	1	1	0.98
Overall solution coverage	0.51	0.48	0.43	0.57
<b>Self-efficacy</b>	●	●	●	●
Consistency	0.98	1	1	0.97
Raw coverage	0.57	0.54	0.48	0.61
Unique coverage	0.57	0.54	0.48	0.61
Overall solution consistency	0.57	1	1	0.97
Overall solution coverage	0.57	0.54	0.48	0.61
<b>Risk perception</b>	●	●	●	●
Consistency	0.98	1	1	1
Raw coverage	0.54	0.51	0.46	0.6
Unique coverage	0.54	0.51	0.46	0.6
Overall solution consistency	0.98	1	1	1
Overall solution coverage	0.54	0.51	0.46	0.6

Black circles (●) indicate the presence of a condition, and unfilled circles (○) indicate the absence of a condition in Tables 4.4 and 4.5.

Results of the research obtained with fsQCA method, indicate the presence of causation, based on relationship with entrepreneurial self-efficacy as individual level characteristic of the entrepreneurial mindset. Obsessive passion leads entrepreneurs to adopt a causal decision-making logic when the lack of perceived risks justifies this choice. For the presence of effectuation, harmonious passion in combination with self-efficacy play an important role; risk perception in the environment in combination with harmonious passion is needed to justify the choice of an effectual, non-predictive decision process. Hypothesis of the study is hereby confirmed.

As results of the research reflected in Tables 4.4 and 4.5 indicate a sufficient level of features to use causal and effectual decision-making logic to entrepreneurs, at the same time mediocre results of coverage scores for all of the cases reflect the necessity in better empirical explanation of the outcomes and necessity of better understanding of causal and effectual decision-making logic to entrepreneurs, it was decided to move towards the aim of the research, which includes development and validation of

a research-based training methodology for business incubators targeted to provide entrepreneurs with activities focused on the development of entrepreneurial mindset as a set of individual level characteristics with a view to moving towards development of a successful BG strategy.

## 5. Methodology for Advancement of the Entrepreneurial Mindset Leading to BG

As the aim of the Doctoral Thesis is to develop and validate a methodology for advancement of the entrepreneurial mindset as a driving force for the creation of a successful born global strategy, a methodology for the purpose to advance the entrepreneurial mindset leading to BG, is created. It consists of two parts: (1) methodology for evaluation of nascent entrepreneur's readiness for BG and (2) methodology for advancement of the entrepreneurial mindset leading to creation of successful BG strategy.

Using the training methodology for advancement of the entrepreneurial mindset leading to creation of successful BG strategy, it is intended that nascent entrepreneurs will be supported to create their own pathway to implementation of successful BG strategy and identify potential methods to reach it. The aim of the training methodology includes obtaining the clarity about the future state of the business growth: How do you get there?

**A kind of 'pilot project' of the training methodology is validated.** Assessment of learning outcomes was provided in the LIAA Sigulda business incubator. The aim of the assessment was to find out the initial results of the training process, provide improvements, if necessary, because the goal of the overall training process is building on key findings to further develop the roadmap for a successful competitive strategy in the global markets. It was decided to include the findings and insights collected through the questionnaire into a report with recommendations to further develop the training process.

The aim of the research to develop and validate a research-based training methodology for business incubators targeted to provide entrepreneurs with activities focused on the development of entrepreneurial mindset as a set of individual level characteristics with a view to moving towards development of a successful BG strategy has been reached.



## CONCLUSIONS AND RECOMMENDATIONS

During the research carried out as part of the Doctoral Thesis, the author has come to the following conclusions.

1. Small and medium-sized enterprises (SMEs) are considered to be the engines of economic growth, they play a key role in generating employment opportunities, producing value-added products, and bringing innovations to national economies. These are the key factors forming the contemporary entrepreneurial society phenomenon.
2. These enterprises are also increasingly entering international markets to exploit the potential of their innovative products and services in a larger marketplace, strive to adapt to transnational markets to compete, grow, and survive. The founders of companies have increasingly adopted a global vision, as a result, the phenomenon of born global (BG) companies has arisen and challenged traditional views on internationalization.
3. Common understanding of the born global definition has been found as a result of domestic expert focus group discussions: *Born Global Company is a company oriented to revenues from international market, capable of the market offering that meets the needs of the international market customers; a company that uses modern technologies.*
4. A born global company can emerge only with the help of an entrepreneur who possesses a certain set of individual features.
5. Entrepreneurial mindset as a specific state of mind and a dynamic process orientates human conduct toward entrepreneurial activities and outcomes.
6. Individual level characteristics of entrepreneurial mindset are the main factors forming a specific state of mind, which orientates a human towards entrepreneurial activities and outcomes.
7. Analysis of the scientific literature discovered that theories, prevailing in the periods of internationalization, justified the occurrence of BG. The basis for decision-making in BGs may alternate between causation and effectuation. The two logics operate together and have been conceptualized as two main decision-making strategies for BG, at the same time serving as the main theoretical basis in the period of prevalence of the BG phenomenon.
8. The niche strategy allows the small players like BGs to avoid head-to-head competition with larger, broadly-based firms that tend to target mass markets. Success of specialized areas called 'niches' is based first of all on the path of introduction of novelties. Network relationships play the key role in supporting the niche strategy.
9. In the case of BG, the individual level characteristics of entrepreneurial mindset forming a specific state of mind, which orientates entrepreneur towards the specific outcomes, e.g. successfully created niche strategy, is based on network relationships. The link between entrepreneurial mindset, born global phenomenon and born global strategy is formed.
10. The survey method, which is mainly concerned with the analysis of qualitative evidence in a reliable manner and enables the reviewer to note the various views and experiences of respondents, was chosen as a data collection tool. It proved to be appropriate and applicable for data collection for further presence analysis of individual level characteristics of entrepreneurial mindset for group of respondents.
11. The fuzzy-set qualitative comparative analysis (fsQCA) was used for survey data analysis. The application of the fsQCA method was successful, although this complex mathematical method is very rarely used in the field of cognition issues.
12. Results of the research show that there is a necessity for better empirical explanation of the outcomes, necessity of better understanding of causal and effectual decision making logic to surveyed entrepreneurs because whereas this study concerns the BG firms, effectuation logic is particularly relevant for developing agility within BG firms, as they most often operate in new niche markets and have to make decisions in the absence of clear preexisting goals.

13. It was concluded that training programs are needed to improve the understanding of causal and effectual decision making logic, these programs should be based on the individual level characteristics of the entrepreneurial mindset. The successful BG strategy is the result of the dynamics of the entrepreneurial mindset hence based on the individual level characteristics of the entrepreneurial mindset.
14. The next conclusion is that the methodology for advancement of the entrepreneurial mindset leading to BG should be formed. The methodology should consist of 2 parts: (1) methodology for evaluation of nascent entrepreneur's readiness for BG and (2) methodology for advancement of entrepreneurial mindset leading to creation of successful BG strategy.
15. To validate the methodology, the LIAA business incubators were selected as organizations designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services.
16. The initial part of training programs, influenced by effectuation theory, has been successfully provided; the task to improve readiness of entrepreneurs to enter international market has been fulfilled.
17. Results, obtained during the assessment of learning outcomes, which was provided after the 'touch point' presentations of participants, are applicable in further development of the methodology.
18. The aim of the research to study the theoretical aspects of entrepreneurial mindset as a dynamic process and its interaction with a born global phenomenon and to develop and validate a methodology for advancement of the entrepreneurial mindset as a driving force for the creation of a successful born global strategy has been reached.

## Recommendations

### For policy makers

1. To show more interest in encouraging and accelerating startups' export activity in order to promote economic growth and boost job creation; to adopt policies that assist SMEs and startups in order to expand into export markets.
2. As born global companies is still-young and little-known area for the economy of Latvia, the recommendation is to adopt policies that help to learn more about this contemporary phenomenon, thus stimulating the interest of nascent entrepreneurs to afford to operate in export markets.
3. Recommended forms of government support are: financial aid-related support initiatives and marketing support initiatives (information-related, training-related, trade mobility-related). Through government agencies potential exporters can access foreign market knowledge, and government support then contributes to the acquisition of accurate knowledge about international markets.

### For researchers and academicians

4. The suggestion is to provide further research on the issues related to integration of BG strategies into modern company's strategic development model with the aim of raising companies' awareness of the importance of operating in the global market.
5. Further studies testing the functionality of methodology proposed in this research need to be conducted in order to raise further discussion between academics and practitioners reducing the gap between theory and practice in the research of the relationship between BG phenomenon, entrepreneur as the main factor of this process and the entrepreneurial mindset.
6. Do not be afraid to involve SMEs as potential for BG in joint R&D projects despite the fact that small companies are more vulnerable to risks entailed in joint R&D. The expected benefits of R&D collaborations for small companies are that they reduce the risks and cut the costs and allow these companies access to the know-how network.

### For business companies and business incubators

7. To learn from the experience of the best business incubators worldwide, as a result, introduce new tools to stimulate knowledge acquisition about global markets for nascent entrepreneurs.

8. To develop and implement collaborative projects with scientific institutions to further explore the factors that should be encouraged to promote entrepreneurs' ability to operate successfully in global markets.
9. To promote business and social networking, domestic and international, from the perspective of their contribution to knowledge and resource flows and availability.

## AUTHOR'S INTERNATIONAL SCIENTIFIC PUBLICATIONS ON THE THEME OF RESEARCH

The results of the Doctoral Thesis have been reflected in 14 scientific publications.

### Scientific articles indexed in the Web of Science and/or Scopus databases:

1. Vaivode, I. (2018). Born Global Companies. Is this a Future for Economy of Latvia? A Preliminary Study. *Business: Theory and Practice*, Vol. 19, pp. 288-299. ISSN 1648-0627. e-ISSN 1822-4202. Available: doi:10.3846/btp.2018.29.
2. Vaivode, I. (2015). Triple Helix Model of University–Industry–Government Cooperation in the Context of Uncertainties. *Procedia - Social and Behavioral Sciences*, Vol. 213, pp. 1063-1067. ISSN 1877-0428. Available: doi:10.1016/j.sbspro.2015.11.526.

### Anonymously peer-reviewed scientific articles published in international journals and available in other databases:

3. Vaivode, I., Ščeulovs, D. (2019). The Relevance of “Born Global” Definition in the Research Process. *Trends Economics and Management*, Vol. 34, Iss. 2, pp. 113-124. ISSN 1802-8527. e-ISSN 2336-6508. Available: doi:10.13164/trends.2019.34.113.
4. Vaivode, I., Jurēnoks, V. (2014). The Role of Innovations in Sustainable Development of State Economy. *Управление и устойчиво развитие = Management and Sustainable Development*, Vol. 45, No. 2, pp. 27-34. ISSN 1311-4506
5. Jansons, V., Jurēnoks, V., Didenko, K., Vaivode, I. (2013). Assesment of Dynamics of the Index of the Innovation (SII) and Its Influence on Gross Domestic Product of Latvia. *Management and Sustainable Development*, Vol. 39, pp. 4-10. ISSN 1311-4506.

### Publications in conference proceedings indexed in Web of Science and/or SCOPUS:

6. Vaivode, I., Ščeulovs, D. (2020). Identification and Creation of Business Opportunities as the Characteristic of the Entrepreneurial Mindset. *The 24th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020): Proceedings*. Vol. 3. ISBN: 978-1-950492-45-9.
7. Vaivode, I., Gaile-Sarkane E. (2016). Evolution of “Design” Concept and Its Application to Innovation in Latvia. *Smart and Efficient Economy: Preparation for the Future Innovative Economy: 21st International Scientific Conference Economics and Management (ICEM 2016): Proceedings of Selected Papers*, Czech Republic, Brno: Brno University of Technology, Faculty of Business and Management, pp. 246-254.
8. Vaivode, I., Jurēnoks, V. (2014). Innovation Policy in the Context of Nowadays Globalisation. *Business and Management 2014: 8th International Scientific Conference: Selected Papers*, Lithuania, Vilnius, pp. 460-468. ISBN 978-609-457-650-8. e-ISBN 978-609-457-649-2. ISSN 2029-4441. e-ISSN 2029-929X.

## Other publications in conference (including local) proceedings:

9. Vaivode, I., Straujuma, A., Gaile-Sarkane, E. (2016). What Latvia Can Learn from Israel University-Industry Innovation Cooperation. *Challenges and Solutions for Fostering Entrepreneurial Universities and Collaborative Innovation: University-Industry Interaction Conference*, Netherlands, Amsterdam, pp. 13-28. ISBN 978-94-91901-21-8.

## Publication on the conference website:

10. Vaivode, I. (2015). *Innovation Policy, Globalisation in Terms of Uncertainty* [online]. 2015. Available from: <http://2015.euramfullpaper.org/program/papers.asp>

## Conference papers:

11. Vaivode, I. (2015). The Interaction of Exploitative, Explorative, Open, Closed Innovations and Different Innovation Strategies. *56th International Riga Technical University Conference "Scientific Conference on Economics and Entrepreneurship": Proceedings*, Latvia, Riga. ISBN 978-9934-8275-3-2. ISSN 2256-0866.
12. Vaivode, I. (2014). Benchmarking Analysis of Four Performance Groups Identified by EU Innovation Union Scoreboard. *55th International Riga Technical University Conference "Scientific Conference on Economics and Entrepreneurship" Proceedings*, Latvia, Riga, Technical University, pp. 1-2. ISBN 978-9934-8275-2-5.
13. Vaivode, I., Jurēnoks, V. (2014). The Assessment of Science, Technology and Innovation Policy of Latvia. *Proceedings of 12th Annual BMDA Conference "Successful 21st Century Organization"*, Latvia, Riga. ISBN 978-9934-10-559-3.
14. Vaivode, I., Jurēnoks, V. (2013). Using of Technology Audit and Modelling Methods for Innovation System Development in Latvia. *54th International Riga Technical University Conference "Scientific Conference on Economics and Entrepreneurship" [CD-ROM]* : SCEE '2013 : Proceedings, Latvia, Riga, Riga Technical University. ISBN 979-9934-10-294-3.

## Presentation and approbation of research results at international scientific conferences abroad:

15. The 24th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020), 13-16 September 2020, Virtual Conference, US.
16. 17th International Scientific Conference "Perspectives of Business and Entrepreneurship Development in Digital Transformation of Corporate Business", 30 April 2019, Brno University of Technology, Faculty of Business and Management, Czech Republic.
17. 10th International Scientific Conference "Business and Management" 2018, 3-4 May 2018, Vilnius Gediminas Technical University, Lithuania.
18. University-Industry Interaction Conference, Netherlands, Amsterdam, 1-3 June 2016.
19. 21st International Scientific Conference "Smart and Efficient Economy: Preparation for the Future Innovative Economy", 19-20 May 2016, Brno University of Technology, Faculty of Business and Management, Czech Republic.
20. International Scientific Conference "Economics and Management – 2015" hosted by School of Economics and Business Kaunas University of Technology, held in Kaunas, Lithuania, 6-8 May 2015.
21. 8th International Scientific Conference "Business and Management'2014", 15-16 May 2014, Vilnius Gediminas Technical University, Lithuania.
22. 16th International Scientific Conference on Management and Sustainable Development, Yundola 2014, Bulgaria.

## Presentation and approbation of research results at international scientific conferences in Latvia:

23. 22nd International Scientific Conference Economics and Management, ICEM, 2017, 10-12 May 2017, Riga.
24. RTU 55th International Scientific Conference “Scientific Conference on Economics and Entrepreneurship (SCEE’2015)”, 15 October 2015.
25. RTU 55th International Scientific Conference “Scientific Conference on Economics and Entrepreneurship (SCEE’2014)”, 15 October 2014.
26. 12th Annual BMDA Conference “A Successful 21st Century Organization”, 7-9 May 2014, Riga, Latvia.
27. RTU 54th International Scientific Conference “Scientific Conference on Economics and Entrepreneurship (SCEE’2013)”, 15 October 2013.

## Participation in research projects:

28. Participation in the EIT Climate-KIC Pioneers Programme with 5-week international placement (25 September - 27 October 2017) in Italy (worked out the project for one of the regions).
29. Researcher in the Horizon 2020 Euratom project “BRILLIANT – Baltic Region Initiative for Long Lasting Innovative Nuclear Technologies” – coordinated by Lithuanian Energy Institute. Project information: grant agreement ID: 662167, start date 1 July 2015, end date 30 June 2018 (closed project).

## Other activities:

30. Reviewer’s Certificate of EURAM Annual Conference held 19-22 June 2018 at the University of Iceland, Reykjavik. Conference: Entrepreneurship; International Management; Strategic Management.
31. Reviewer’s Certificate of EURAM Annual Conference, which was held 21-24 June 2017 at the University of Strathclyde, Glasgow, Scotland, UK. Conference: Innovation; International Management; Strategic Management.
32. Participation in workshop “An introduction to Research Data Management”, 13 April 2016, Digital Curation Centre.
33. KTU 1st International PhD Summer School in Palanga, 23-26 August 2016.
34. Participation in seminar “Take advantage of research data management”, 14 October 2015, within the framework of RTU 56th International Scientific Conference.
35. 9 ECTS EU Lifelong learning Program Erasmus Intensive Program “Conducting interdisciplinary research in cross-cultural environment” (2013-1-LV1-ERA10-05531), 29 March - 10 April 2014.
36. RTU Professional Development Seminar “Sources of Financing for Innovation and Business”, 13 March 2014, Riga, Certificate, series PNI Nr. 1217.
37. Participation in the practical seminar organized by RTU “Pedagogical work at the university” (10 hours), 2014, Certificate No. DS-14 / 0014.



**Irēna Vaivode** was born in 1962. She obtained the qualification of a physicist from the University of Latvia in 1986 and an MBA degree from the RTU Riga Business School in 1998. She worked for 5 years as an engineer at the Riga Research Institute of Semiconductors. Her most successful field of activity in previous years has been the tourism industry, where she gained significant international work experience. In recent years, she has been working in the pedagogy and participated in research projects.