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# Bibliometric Assessment of Research on Risk Attitude of Entrepreneurs

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The influence of the attitude towards risk on decisions that entrepreneurs take in business is a field of major interest reflected by the increasing number of published papers. This article analyzes the publications included in the Web of Science databases over 1991–2019 period and assesses the correlations made by specialists between certain features of risk attitude in entrepreneurship. Multiple information was evaluated: the number of published papers, information about authors and their nationality, the number of citations received by the selected papers. A keyword analysis, including occurrence, co-occurrence (link strength) and links between them and a keywords map was also performed with a software. The utility in using a bibliometric analysis is to help researchers and scholars to identify new research directions regarding the role of risk attitude and the decision-making process in entrepreneurship.

*Key words:* risk, risk attitude, bibliometric analysis, entrepreneurship, entrepreneur

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## Introduction

The influence of risk on entrepreneurial activity is undeniable; which is why more and more researchers are analysing its impact, developing methods and methodologies in order to treat risks. The

specialists argue that there is a correlation between the predisposition towards the risk of the entrepreneurs and the financial performances registered by an enterprise (Yang, Ishtiaq, and Anwar 2018).

Most commonly, entrepreneurship is defined as a process where a new enterprise or new product/service that didn't exist before is created (Draheim 1972). Since the beginning of the researches into entrepreneurship, there have been authors who relate this field to risk, such as Cantillon (2010), Knight (1921), Kirzner (1973), Kihlstrom and Laffont (1979). More recently, many authors relate the success of a business to the risk attitude of the entrepreneur. These authors include Cliff (1998), Caliendo, Fossen, and Kritikos (2010), Brustbauer (2014), Yang, Ishtiaq, and Anwar (2018), Hanggraeni et al. (2019), Bartolacci, Caputo, and Soverchia (2020).

Through this paper, structured in four chapters (introduction, literature review, research methodology and data collection, results and discussion, conclusions), the authors want to highlight the importance of the attitude towards risk in entrepreneurship. Within this bibliometric analysis the authors analysed the studies carried out by scientific researchers that were published in journals and volumes of conferences indexed in the Web of Science database.

### Literature Review

Specialized literature defines entrepreneurship in various forms, but still having distinct approaches in the view of those who research this subject. In the matter regarding the correlation between risk and entrepreneurial activity, the studies show that the correlation is accepted and recognized by all specialists. Thus, the entrepreneurs attitude towards risk is considered an important aspect in the conduct of the entrepreneurial activity (Cramer et al. 2002), numerous studies are being carried out regarding the predisposition of the entrepreneurs to the risk and the performances registered by them (Brustbauer 2014; Yang, Ishtiaq, and Anwar 2018; Bartolacci, Caputo, and Soverchia 2020; Hanggraeni et al. 2019).

The controversies created by the financial performances obtained by the companies have led to the reorientation of more people towards a career as entrepreneurs, but also to the emergence of a new typology of entrepreneurs who divide their time between the tasks of being an employee and the ones from being an entrepreneur in order to minimize their risks (Burmeister-Lamp, Lévesque, and Schade, 2012).

A considerable number of studies (37700 according to Google

Scholar) have been researching the behavioural traits that distinguish entrepreneurs from other people. A part of the literature investigates the attitude of entrepreneurs towards uncertainty. The existing theories predicts that those involved in entrepreneurial activities tend to have a distinct attitudes toward risk compared to those who are mere employees (Folta, Delmar, and Wennberg 2010).

The impact of the risk on the entrepreneurial activity generated the emergence of a type of entrepreneur defined by the specialists in this field as 'hybrid entrepreneur.' According to Inc. Magazine, since 1995, a common practice among new entrepreneurs is to carry out the entrepreneurial activity concurrently while being an employee within another company. Experts in this field have stated that this practice is a result of the new entrepreneurs' need to reduce the risks they are exposed to (Burmeister-Lamp, Lévesque, and Schade 2012). This type of entrepreneurs, which has emerged as a direct effect of the risk impact, manages the time given to the company according to the attitude towards the risk (Burmeister-Lamp, Lévesque, and Schade 2012). The authors of this new typology of entrepreneurs say that the entrepreneur with a predisposition to risk allocates more time to the company than a risk-reliant new entrepreneur. Also, these entrepreneurs are known for their desire to analyse the market of commercialized products/services, but also for the fact that they test their entrepreneurial skills according to the specific risks of the activity carried out (Folta, Delmar, and Wennberg, 2010).

More recent research shows that the age (Elam et al. 2019), gender of the entrepreneur (Dawson and Henley 2015) and experience in the market (Bosma et al. 2016) significantly contribute to the predisposition towards the risk of the entrepreneur.

Regarding the level of experience, it mainly influences the decisions taken under conditions of uncertainty. Depending on the decisions made under risk conditions, the types of entrepreneurs are distinguished (those who have an aversion for risks and those who are predisposed to it). By decisions taken under uncertainty and high risk the literature means taking decisions in a short period of time, based on reduced information, frequent changes in the structural variables or in the economic environment in which the company operates. Given these aspects, there are no two decision-makers who have the same quantitative perception, the same degree of knowledge or the same personal opinions. Therefore, these types of decisions are most often influenced by the entrepreneur's emotions and goals (Michl et al. 2009).

An interesting aspect about the influence of risks in entrepreneurial

activity is found in the study conducted in Burmeister-Lamp, Lévesque, and Schade (2012), in which the authors of the paper analysed a mixed group of students and entrepreneurs and concluded that in the case of students, regardless of their gender, the time allocated by them would decrease when the company recorded the desired financial performance. However, younger entrepreneurs, unlike the older ones, tend to be less risk-averse, especially if the financial results are in line with their goals. This determines the risk attitude of the entrepreneur based on the correlation between the risk and the income that the company can record.

However, a crucial aspect in making decisions in conditions of uncertainty is the entrepreneur's abilities (Caliendo, Fossen, and Kritikos 2006) that do not always depend on the entrepreneur's gender, age or the domain of activity of the company. Meaning, the probability that the decision taken will result in a low income or to even turn into losses is significantly reduced depending on the entrepreneurial abilities of the person making the decision, and the implications of the risks assumed are minor. A comparative analysis of the level of risk assumed by different entrepreneurs working in the same field, same area and with the same entrepreneurial skills, but with different levels of experience in the field of activity, revealed significant differences in the generated results, and the impact on the results is correlated strictly with the decision maker (Caliendo, Fossen, and Kritikos 2006).

Block, Sander, and Spiegel (2015) concluded based on their study that entrepreneurs who have reoriented themselves to such a career out of necessity are more risk-averse, and those who are motivated by creativity and innovation are more at risk.

The entrepreneur's risk attitude influences the whole life cycle of the company's. While recent research analyses and formulates theoretical proposals on the positive correlation between the risk attitude and the decision to become an entrepreneur, the effects of external factors (such as environment changes, legislation, market changes etc.) on the survival of an enterprise are not considered simple (Caliendo, Fossen, and Kritikos 2010).

However, there are also specialists who say that the entrepreneur's risk attitude does not significantly influence the performance of the company, and the registered profit does not increase based on the risky attitude (Rauch and Frese 2007).

Contradictory to those studies, are some papers based on the relationship between the profile of entrepreneurs and the company's financial performance. Caliendo, Fossen, and Kritikos (2010) tested



this hypothesis and concluded that the entrepreneurs risk attitude is a defining factor for the survival of a business. They stated that only long-term entrepreneurs or those with a low level of risk tolerance resist the market for a long time. From a financial point of view, some studies have shown that the financial rate of return of enterprises run by entrepreneurs with an average level of risk tolerance decreases by about 40% compared to entrepreneurs with a predisposition to risk or those who are risk-averse (Cramer et al. 2002; Block, Sander, and Spiegel 2015).

The economic and financial implications of the entrepreneurs risk attitude are a subject of continuous debate and research, even if the impact, regardless of the degree of influence, is confirmed by many specialists to be affecting the enterprises activity. This correlation is deepened by the researchers even in the analysis of the personality of the entrepreneurs in order to establish some traits of potential entrepreneur based on the reluctance/predisposition to risk. (Block, Sander, and Spiegel 2015).

Regarding the utility of the bibliometric analysis and the systematic review type analysis to assess the influence of the attitude towards risk in entrepreneurship, we note the studies of Thananusak (2019), who appreciated that since mid-1990 the analysis of the influence of entrepreneurship in the economy has intensified, and the impact of attitude towards risk in sustainable development; Aparicio, Iturralde, and Maseda (2019), who highlighted the impact of entrepreneurial education on entrepreneurship risk attitude, and Georgalos (2017), who does an extensive review of the correlation between entrepreneurship decision-making and risk attitude.

This paper aims to analyse the extent to which the relationship between risk attitude and entrepreneurship is reflected in the literature. In order to carry out this analysis, the authors have followed the evolution of the published papers on the risk attitude of the entrepreneurs at global level during the period 1990–2019. As a research method the authors used the bibliometric analysis.

## Research Methodology and Data Collection

The bibliometric analysis evaluates the interest of the specialists granted to a certain field on the basis of a complex and complete data source that offers a perspective on a period of time from which the scientific researchers began to deepen the targeted field. At the same time, through this type of analysis we appreciate many other information such as: number of published studies, information about authors (nationality), type of papers (article, proceedings paper, re-

view, book chapter etc.), but also the number of citations the papers received. Currently, this type of analysis is used to assess the correlations made by many specialists between certain specific features of a domain (Servantie et al. 2016; Zheng 2018; Dan and Goia 2018; Berbegal-Mirabent, Alegre, and Ribeiro-Soriano 2018; Dionisio 2019; Lampe, Kraft, and Bausch 2019; Gora 2019).

The research methodology consists in studying the Web of Science database in order to extract and synthesize relevant information from the generated results. The authors have chosen this database for its international recognition of the quality of the published and indexed papers. The generated results were filtered in order to analyse only articles, proceedings paper and reviews, and the results obtained subsequently were evaluated according to the number of published papers, the authors of the studies, the authors nationality, the countries that generated the largest number of studies, the publication period of the resulted studies, the number of citations, the fields and industry of research, but also the sources of publication. The research also includes keyword analysis including occurrence, co-occurrence and links between them and a keywords map.

By searching in January 2020 in the Web of Science database for the keywords 'entrepreneurship' and 'risk attitude' in the topic, from January 1991 until December 2019 were displayed a number of 318 publications, which filtered counted 300 studies based on which was done this study. Furthering the analyses on those publications revealed an overlap of five studies by Clarivate (the total of article-type studies, proceedings paper and review after filtering was 300). The following papers were indexed as articles and proceedings paper 'Uncertainty Avoidance and the Rate of Business Ownership across 21 OECD Countries, 1976–2004' (Wennekers et al. 2007), 'Competitive in the Lab, Successful in the Field?' (Berge et al. 2015), 'A Design Thinking Approach to Introduce Entrepreneurship Education in European School Curricula' (Val et al. 2017), 'What Drives Entrepreneurship in Digital Economy? Evidence from China' (Yin et al. 2019), and 'Entrepreneurial Intentions of Students in Poland in the View of Ajzen's Theory of Planned Behaviour' (Wach and Wojciechowski 2016).

## Results and Discussion

### ANALYSIS OF THE SELECTED PAPERS

This analysis resulted in a number of 300 papers, which was reduced to 295 articles, reviews and proceedings paper as a result of Clari-

vate's double indexation of five studies as articles and proceedings papers. Thus, the number of studies indexed as proceedings was reduced from 59 to 55. According to the selected data, the largest share on the market of scientific researches is held by articles, which have a number of 234 publications (79.32%), and in the minority percentage are publications from the proceedings paper (55 studies – 18.64%) and review (6 studies – 2.03%).

Regarding the research based on entrepreneurship, the basis of this area of interest has been laid since the trading period, but the very notion of entrepreneurship appeared in 1755, first mentioned by Cantillon Richard, an illustrious economist known for his many contributions to the economy (Chițimiea et al. 2019).

Further researches has been done on this field since 1990 after specialists found out the vital role of the entrepreneurs in the sustainable development of the economy of a region/country.

Figure 1. highlights the state of the research conducted on the entrepreneurs risk attitude on annual level. The graphic shows an upward trend in the number of studies carried out, which is in line with the continuous economic development and the agenda of the European Union authorities on entrepreneurship development. Between 1991 and 2011 the studies published in this field recorded an average of 3 publications/year, the maximum being 7 publications. Subsequent to 2011, the interest in entrepreneurship was stimulated by the emergence of external financing programs, and with the infusion of start-up companies, the research done in the field of risk management and the entrepreneurs risk attitude has intensified. Analysing the period 2011–2012, there is an increase in the number of studies of 12 publications (4.07%), and from 2013 until 2019 the average of studies has increased to 32 publications/year. The greatest impact in the research on the correlation between the risk attitude and entrepreneurship was registered in 2019. However, the number of published studies has increased significantly since 2016, when it almost doubled (41 published studies in 2016 compared to 25 studies in 2015). The interest in the correlation between the level of risk tolerance, the attitude towards it and the successful entrepreneurs led to deepening the field, and in 2019, the number of published studies exceeded the level of 2016 (46 published studies).

The dispersion of domains in which the analysed studies are classified is presented in figure 2. The highest weight in the areas of interest is occupied by the business field (114 studies), followed by management (98 studies) and economy (85 studies). These results are supported by the fact that risk management is a prerogative for

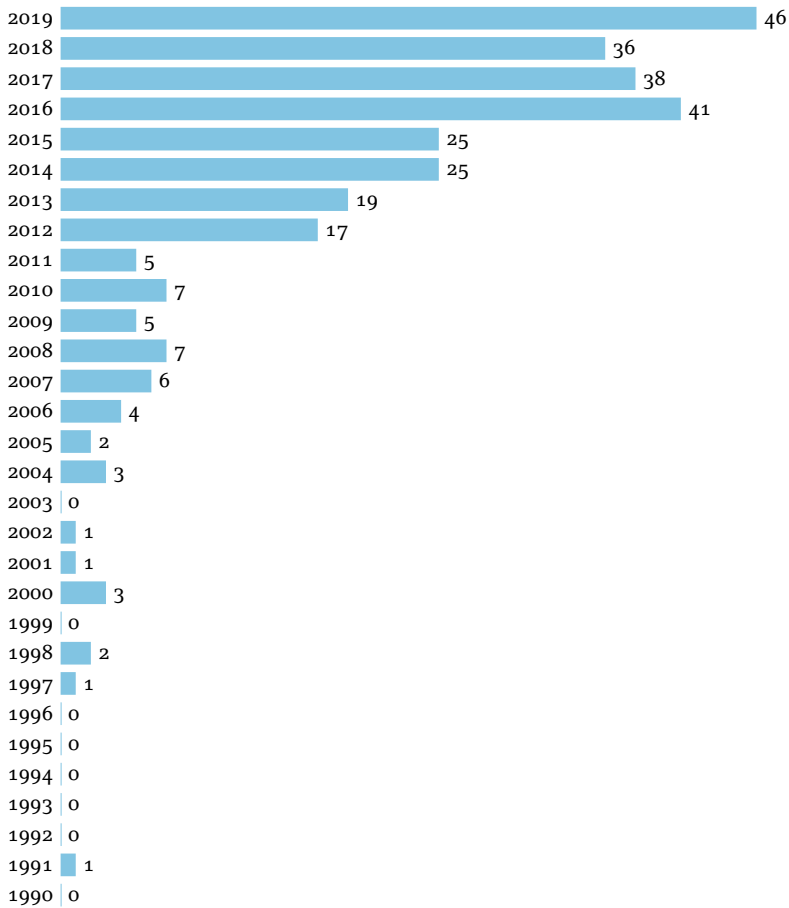


FIGURE 1 Published Papers per Year (based on data from Web of Science, [www.webofknowledge.com](http://www.webofknowledge.com))

those areas. The domains with relatively large number of published studies include the educational system (32 papers), psychology (12 papers) and ecology (11 papers). The statistics are justified by the fact that the influence of education and personal characteristics on the attitude towards risk is recognized. With regard to ecology, the published studies deal with the interaction between risk and environmental factors. In contrast, in the analysis were also highlighted the areas in which the number of published studies were few. These include: scientific disciplines (4 studies), forestry (3 studies), ethics (3 studies) geography (2 studies), chemistry (2 studies), engineering (2 studies).

## Bibliometric Assessment of Research on Risk Attitudes



FIGURE 2 The Research Areas on Basis of the Number of Published Articles (Based on data from Web of Science, [www.webofknowledge.com](http://www.webofknowledge.com))

The number of researchers and the studies carried out aimed at this field is increasing, and the contributions to the scientific environment by each region.

In the next phase of this study, we will refer to the continents Europe and Asia as Eurasia due to Russia presence in statistics, a country that is located in both the continents mentioned, and furthering the analyses we will detail the contribution of these two continents separately.

The largest share is held by studies from authors from Eurasia (78.05%), followed by those in America (16.83%). The lowest weights were obtained by Africa (3.41%) and Oceania (1.71%). The discrepancy between the number of studies carried out in Eurasia and the rest of the areas is due to the structure of the analysed continents. In Eurasia were included the 30 countries from the European area whose contribution registered 253 studies (79.06% of the total of 320 studies), the papers carried out in the Asian space that contribute to

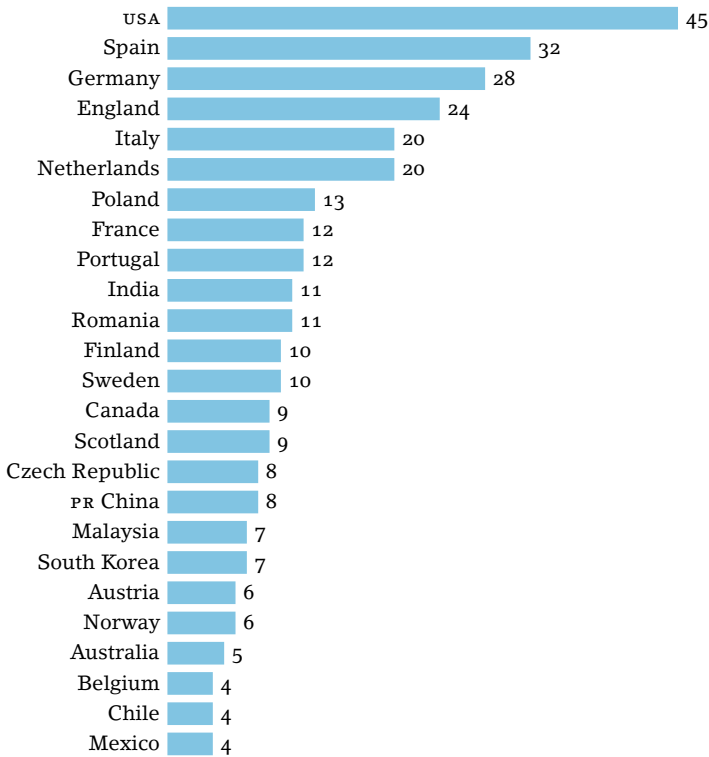


FIGURE 3 Distribution of Papers by Country to Which the Authors Are Affiliated (based on data from Web of Science, [www.webofknowledge.com](http://www.webofknowledge.com))

this analysis registered a number of 64 studies (20% of the total of 320 studies), and also those from Russia (3 studies, about 0.94% of the 320 total studies).

Analyzing the countries' contributions, the largest number of studies is held by the United States of America, with the majority percentage of 14%, followed by Spain, with 10% (figure 3). Given that 286 of the studies are done in English (96.95%) and 7 papers (2.37%) are in Spanish, the presence of these two countries in the first two positions is explained. There is also a paper published in Russian (0.34%) and a paper in Polish (0.34%), but Russia is not among the countries with the highest number of contributions, while Poland has a weight of 4%. Other countries whose contributions were notable include Germany (9%), England (7%), Holland and Italy (6%), France and Portugal (4%), Romania, Canada and India (3%). There are also countries with lower weights such as Austria (2%), Australia (2%), Belgium (1%), Chile (1%) and Mexico (1%) (figure 3). The statis-

TABLE 1 The 25 Journals with the Largest Number of Publications

Source titles	(1)	(2)
<i>Small Business Economics</i>	9	3.05
<i>International Entrepreneurship and Management Journal</i>	8	2.71
<i>Journal of Business Venturing</i>	8	2.71
<i>Journal of Economic Behavior Organization</i>	6	2.03
<i>Procedia Social and Behavioral Sciences</i>	6	2.03
<i>Proceedings of the European Conference on Entrepreneurship and Innovation</i>	6	2.03
<i>Journal of Economic Psychology</i>	5	1.69
<i>International Business Review</i>	4	1.36
<i>International Journal of Entrepreneurial Behavior Research</i>	4	1.36
<i>Journal of Technology Transfer</i>	4	1.36
<i>Applied Economics Letters</i>	3	1.02
<i>Contributions to Management Science</i>	3	1.02
<i>Economic Research</i>	3	1.02
<i>Education and Training</i>	3	1.02
<i>Entrepreneurial Business and Economics Review</i>	3	1.02
<i>Entrepreneurship Research Journal</i>	3	1.02
<i>Forest Policy and Economics</i>	3	1.02
<i>Journal of International Entrepreneurship</i>	3	1.02
<i>Journal of Small Business and Enterprise Development</i>	3	1.02
<i>Journal of Small Business Management</i>	3	1.02
<i>Proceedings of the 9th European Conference on Innovation and Entrepreneurship ECIE 2014</i>	3	1.02
<i>Sustainability</i>	3	1.02
<i>2nd Cyprus International Conference on Educational Research CY ICER 2013</i>	2	0.68
<i>Annals of Regional Science</i>	2	0.68
<i>Asia Pacific Journal of Innovation and Entrepreneurship</i>	2	0.68

NOTES Column headings are as follows: (1) number of records, (2) percentage of 295. Based on data from Web of Science ([www.webofknowledge.com](http://www.webofknowledge.com)).

tics is influenced by the fact that most publications indexed in Web of Science are in English, regardless of the country of origin.

This bibliometric analysis also included the journals whose contribution had a significant impact in the field of research. From the total of journals that are indexed ISI, within this analysis were highlighted the first 25 journals with the largest number of papers researching the correlation between 'entrepreneurship' and 'risk attitude' (table 1). The ranking includes twenty-one journals and four volumes of conferences with a representative number of papers.



FIGURE 4 Cluster Chart of the Analyzed Journals (created with the vosviewer)

Furthering in this study, the authors have made a visual representation of the journals density was made based on the vosviewer program. In this type of view, journals are represented according to the density of the number of publications they have in the respective fields. The colours of this representation vary from green to yellow (Jan Van Eck and Waltman 2019).

An analysis carried out using the vosviewer program based on the cluster density of the journals has resulted after filtering the studies has reveal the results from the graph obtained in figure 4. The density visualization based on the cluster analysis is possible only if the articles were grouped on clusters. This type of density visualization (cluster) is similar to the element density visualization, the only exception being the fact that the density of the items is displayed separately for each group of analysed elements (Jan Van Eck and Waltman 2019). The colour of a point within this visualization is obtained by mixing the colours of the different clusters, and the colour intensity is generated by the number of journals belonging to that cluster. Also, the larger the number of journals around the node and respectively, the greater the density of the other journals (they have a greater number of published papers), the closer the colour of the node is to yellow. Conversely, if the number of journals around is reduced and the density of those journals is reduced, the respective node may have a blue colour.

Within this analysis the number of publications of the journals was evaluated according to the research field, and as shown in figure 4, the program grouped the journals into 5 clusters. Thus, the clus-



TABLE 2 Top 15 Authors and Institutions with the Most Contributions Targeted by the Analysis

Authors	Institutions	(1)	(2)
Thurik	Erasmus University Rotterdam	4	1.36
Fossen	University of Nevada Reno	4	1.36
Dimitratos	University of Glasgow	3	1.02
Nybakk	Kristiania University College	3	1.02
Rodrigues	Universidade do Minho	3	1.02
Van Der Zwan	Erasmus University Rotterdam	3	1.02
Vieira	Universidade do Minho	3	1.02
Arat	Pamukkale University	2	0.68
Bartos	Masaryk University Brno	2	0.68
Bernat	University of Szczecin	2	0.68
Block	Universitat Trier	2	0.68
Bonilla	Universidad de Chile	2	0.68
Brown	University of Sheffield	2	0.68
Caliendo	University of Potsdam	2	0.68
Cepel	LIGS Univ LLC Honolulu	2	0.68

NOTES Column headings are as follows: (1) number of records, (2) percentage of 287. Based on data from Web of Science ([www.webofknowledge.com](http://www.webofknowledge.com)).

ters whose weight is significant are those in the economic area (red) whose category registers 109 journals, the clusters from the management area (green) whose category contains 44 journals and the cluster in the research-development area (blue) which contains 33 journals. The smallest contributions can be found in the marketing area (yellow) with 26 journals and the financial area (purple) with 20 journals. Therefore, the journals in the marketing area had a larger number of journals around them (the management journals being larger and with a significantly higher number of publications), and the journals in the research-development area were more numerous; larger than those in the marketing area (33 journals compared to 26 journals) and had a smaller number of publications compared to those in the other areas.

Regarding the most published authors, the first two positions in the ranking are occupied by Associate Professor Frossen Frank M., Professor of Management at the University of Nevada Reno, and by PhD. Prof. Thurik Roy, Professor of Entrepreneurship and Economics at Montpellier Business School in France, Professor of Entrepreneurship and Economics at Erasmus University Rotterdam, and also Professor of Entrepreneurship for Small and Medium Enterprises at the School of Business and Economics, Free University

Amsterdam. The contribution of both researcher had a weight of 1.36% (4 papers) each. The following five positions are occupied by researchers who had a weight of 1.02% (3 papers). Among them are: PhD. Prof. Dimitratos Pavlos (Professor of Management at the University of Glasgow), PhD. Prof. Rodrigues Cristina (Minho University, Portugal). The smallest weights, according to table 2, are 0.68% (2 papers).

#### CITATION ANALYSIS

An important aspect of this bibliometric analysis is the number of citations. This is one of the main criteria according to which the contribution of the published studies in a research field is determined.

Starting with 1990, the beginning year of the studies realized on entrepreneurship (Thananusak 2019), the number of published studies was very small (4 papers in the period 1991–1998), which is why we can explain the small number of citations in the period 1991–1998. According to figure 5, the development of entrepreneurship is direct result for the increase of the number of studies, impact observed also in the increasing number of citations. Regarding the 4 studies published in the period 1991–1998, there has been found a very big difference in the number of citations. Thus, Andrews (1991) had only 2 citations form 1991 until 2019, and Pehu, Avotie, and Lasonen ('Training Needs in Entrepreneurial Leadership for Women: Cases from North and South,' 1997) had none. In the other two cases, 327 – 'Exploring the Relationship between Attitudes towards Growth, Gender, and Business Size' (Cliff 1998) – and 894 citations were recorded – 'Does Entrepreneurial Self-Efficacy Distinguish Entrepreneurs from Managers?' (Chen, Greene, and Crick 1998). The interest in the influence of entrepreneurship risk attitude has continued to grow, and the impact on the citation is most noticeable in the period 2016–2019 (figure 5). For the analysed period (1991–2019), the highest number of citations was achieved in 2019 (821 citations), a significant increase compared to previous years, 2018 or 2017.

An in-depth analysis of citations, table 3 presents the first 10 published studies that recorded the highest number of citations. The most cited paper is written by Chen, Greene, and Crick (1998) and recorded a total of 894 citations (with an average of 38.87 citations/year). It is worth mentioning that this paper is published in the *Journal of Business Venturing*. The same journal also published the next most cited paper, Cliff (1998), which has a total of 327 citations (an average of 14.22 citations/year) and the paper that holds the position 6 in table 3, respectively Douglas and Shepherd (2000), has a

## Bibliometric Assessment of Research on Risk Attitudes

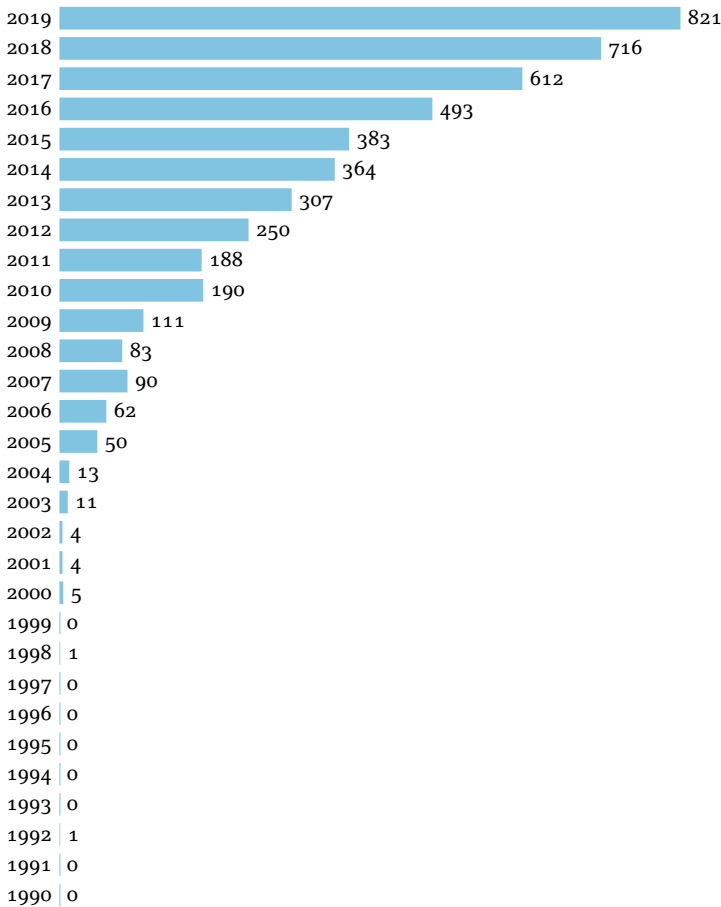


FIGURE 5 The Number of Citations Represented at Annual Level (based on data from Web of Science, [www.webofknowledge.com](http://www.webofknowledge.com))

total of 175 citations (8.33 citations/year). The journal ranked 1st in table 1, *Small Business Economics*, occupies two positions in table 3, with the studies of Caliendo, Fossen and Kritikos (2009), and Grilo and Irigoyen (2006).

We have to mention that none of the authors from table 2 (the first 15 authors with the most publications targeted by this analysis), was not among the studies with the highest number of citations. Also, neither the journals with the highest number of publications isn't in this ranking. In contrast, *Annals of Regional Science* published the paper ranked 7th in table 2 with the paper by Wagner and Sternberg (2004), which recorded 153 citations (an average of 9.00 cita-

TABLE 3 Top 10 Most Cited Studies during 1990–2019

Title	Authors	(1)	(2)
Does Entrepreneurial Self-Efficacy Distinguish Entrepreneurs from Managers?	Chen, Greene, and Crick (1998)	894	38.87
Does One Size Fit All? Exploring the Relationship between Attitudes towards Growth, Gender, and Business Size	Cliff (1998)	327	14.22
Low Risk Aversion Encourages the Choice for Entrepreneurshi	Cramer et al. (2002)	183	9.63
Entrepreneurial Orientation of SMES, Product Innovativeness, and Performance	Avlonitis and Salavou (2007)	181	12.93
Risk Attitudes of Nascent Entrepreneurs: New Evidence from an Experimentally Validated Survey	Caliendo, Fossen, and Kritikos (2009)	178	14.83
Entrepreneurship as a Utility Maximizing Response	Douglas and Shepherd (2000)	175	8.33
The Roots of Entrepreneurship and Labour Demand: Individual Ability and Low Risk Aversion	Van Praag and Cramer (2001)	154	7.70
Start-up Activities, Individual Characteristics, and the Regional Milieu: Lessons for Entrepreneurship Support Policies from German Micro Data	Wagner and Sternberg (2004)	153	9.00
Entrepreneurship in the EU: To Wish and Not to Be	Grilo and Irigoyen (2006)	143	9.53
Entrepreneurial Interest of University Students in Singapore	Wang and Wong (2004)	141	8.29

NOTES Column headings are as follows: (1) number of citations, (2) average number of citations. Based on data from Web of Science ([www.webofknowledge.com](http://www.webofknowledge.com)).

tions/year), 10 citations more than the paper done by the authors Grilo and Irigoyen (2006) from Small Business Economics magazine, which has the most publications of interest according to table 1.

As shown in table 4 of the top 10 most cited studies, some papers have started to be cited from 2000 (Chen, Greene, and Crick), and the rest of the studies since 2009. However, the number of citations has increased significant since 2013, and continuing to grow since then with slight fluctuations depending on the area of interest of the researchers.

### Keywords Analysis

The keyword analysis is based on the centralization of all 6594 keywords within all 295 papers. In order to carry out an in-depth analysis, both the keywords proposed by the authors and the keywords

TABLE 4 Citations Received by Year

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2000	5	0	0	0	0	0	0	0	0	0
2001	2	2	0	0	0	0	0	0	0	0
2002	1	2	0	0	0	1	0	0	0	0
2003	6	3	0	0	0	2	0	0	0	0
2004	8	1	1	0	0	2	0	1	0	0
2005	21	10	4	0	0	4	5	4	0	1
2006	18	20	5	0	0	2	7	7	0	2
2007	25	17	7	0	0	6	7	10	6	7
2008	30	13	5	1	0	3	5	3	9	5
2009	33	14	5	4	1	2	3	6	8	7
2010	44	25	14	7	9	13	12	9	14	7
2011	42	11	12	17	9	9	15	11	12	10
2012	56	23	9	16	20	15	9	12	10	9
2013	77	27	13	15	13	18	13	14	13	4
2014	66	16	29	25	22	9	19	15	14	11
2015	90	23	14	15	17	17	15	7	13	15
2016	76	25	13	23	27	15	9	18	10	18
2017	91	31	18	21	17	14	11	16	15	15
2018	90	35	16	17	22	28	11	12	11	18
2019	110	28	16	20	21	15	13	8	8	12

NOTES Column headings are as follows: (1) Chen, Greene, and Crick (1998), (2) Cliff (1998), (3) Cramer et al. (2002), (4) Avlonitis and Salavou (2007), (5) Caliendo, Fossen, and Kritikos (2009), (6) Douglas and Shepherd (2000), (7) Van Praag and Cramer (2001), (8) Wagner and Sternberg (2004), (9) Grilo and Irigoyen (2006), (10) Wang and Wong (2004). Based on data from Web of Science ([www.webofknowledge.com](http://www.webofknowledge.com)).

added by the web of Science were included in the indexing of each paper.

The first stage of this analysis involved extracting all the information from the Web of Science database, selecting all the information relevant to the study (authors' names, title of the paper, abstract, year of publication and keywords), and then exporting them to the desired format for the program vosviewer (Clarivate Analytics 2019). Subsequently, they were introduced into the program that selected automatically the keywords based on their frequency and relevance for the case study conducted (Jan Van Eck and Waltman 2019; Gora 2019; Marinescu, Cicea, and Colesca 2019). Given the program setting that allows you to manually select the desired frequency, we reduced the number of keywords in order to minimize the number of keywords to only those that had a minimum of 10 occurrences. This

TABLE 5 The List of Keywords Analysed Based on Occurrence and Relevance

Keyword	(1)	(2)	Keyword	(1)	(2)
risk attitude	45	2.29	field	22	0.41
skill	41	0.53	man	22	1.75
decision	40	1.17	creativity	21	1.18
firm	40	1.52	employment	21	0.79
knowledge	40	0.41	technology	21	1.12
entrepreneurial intention	39	2.07	entrepreneurial orientation	20	2.23
performance	36	0.83	goal	20	0.84
woman	35	0.89	probability	19	3.98
culture	32	0.58	region	19	0.45
growth	32	0.77	economic development	18	0.49
variable	30	0.52	own business	17	0.58
willingness	30	0.61	employee	16	1.53
control	29	0.87	uncertainty	16	0.63
market	28	0.65	achievement	15	1.13
preference	28	2.54	organization	15	2.39
gender	27	0.69	economic growth	14	0.63
risk aversion	27	2.80	effort	14	0.43
self-employment	27	2.30	entrepreneurial skill	14	1.08
enterprise	26	0.62	income	14	0.72
management	26	0.83	personality trait	13	1.16
innovativeness	25	0.61	SMES	13	1.43
resource	25	0.30	account	12	1.06
age	24	1.58	barrier	12	0.47
behaviour	24	0.58	entrepreneurial behaviour	12	1.28
manager	24	1.32	evaluation	12	1.34
entrepreneurship education	23	1.23	positive attitude	12	0.60
failure	23	0.97	policy maker	11	0.67
problem	23	0.34	financial risk	10	1.09
degree	22	0.60			

NOTES Column headings are as follows: (1) occurrences, (2) relevance. Based on data from Web of Science ([www.webofknowledge.com](http://www.webofknowledge.com)).

filtering resulted in 193 keywords to be analysed, out of which 77 keywords were considered to be the most relevant keywords. Based on the relevance considered by the authors, they were restricted to 57 keywords. Based on table 5, which presents the keywords sorted by the frequency of use and their relevance for the current study, the keywords were grouped into clusters according to the vos clustering technique explained by the authors of the manual (Jan Van Eck and Waltman 2019).

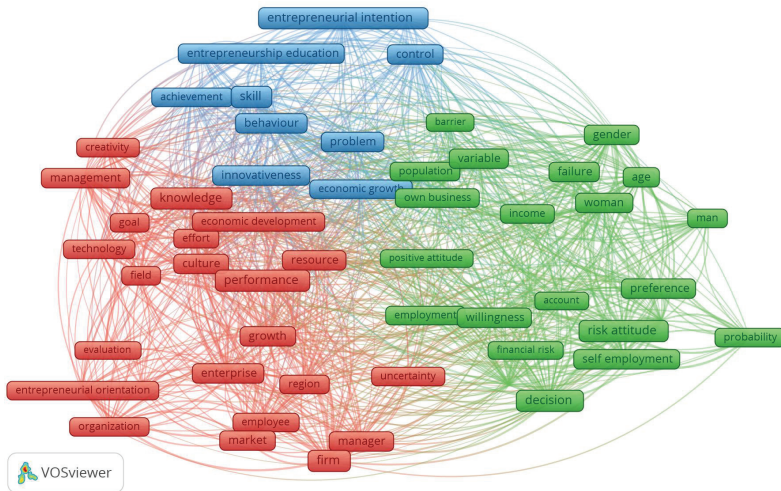


FIGURE 6 Keyword Map Based on Links (created with the vosviewer)

Regarding the vos clustering technique, as other specialists have done (Gora 2019; Marinescu, Cicea, and Colesca 2019; Jan Van Eck and Waltman 2019), we used the number of nodes (keywords), the links between them, the total number of links and the total force between them. Thus, starting from this information, for each node has been calculated the distance from the other nodes and for each of these nodes has been subsequently positioned in a two-dimensional space (a mapping type representation).

The synthesis of the previous information can be found in figure 6, which shows the mapping view of the 57 keywords presented in table 5. Figure 6 shows the 57 nodes (the keywords found in at least 10 of the analysed studies that has been presented in table 5), The links between the nodes from the map are made according to their frequency in the studies, and the size of a node is influenced by the frequency of its use as a keyword or by the number of keywords found within it. Based on the information found in both figure 6 and table 5, we can conclude that the largest node is 'risk attitude,' but the highest frequency is 'entrepreneurial' with the frequency of 85 occurrences ('entrepreneurial behaviour' – 12 uses; 'entrepreneurial intention' – 39 uses; 'entrepreneurial orientation' – 20 uses; 'entrepreneurial skill' – 14 uses). The result is expected given the fact that those keywords are defining for the topic being treated.

Regarding the cluster analysis of the 57 keywords, the program

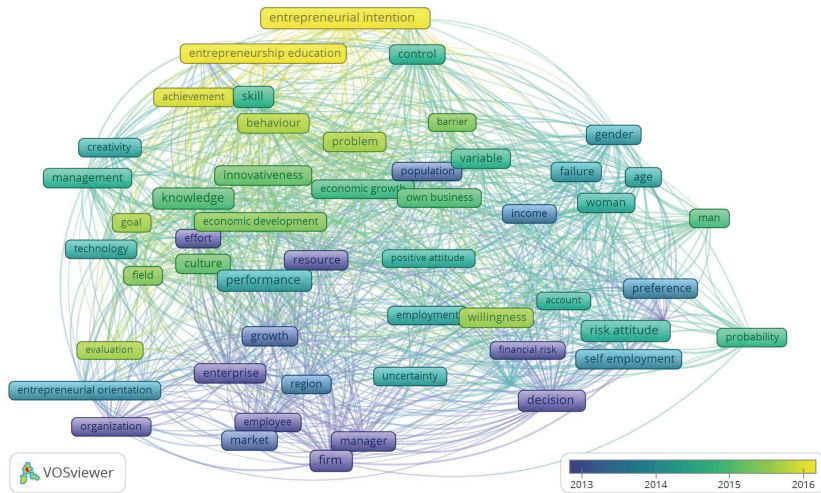


FIGURE 7 Keyword Map Based on Their Frequency on a Period of Time (created with the vosviewer)

grouped the keywords into 3 clusters highlighted with different colours (red, green and blue). According to the visual representation in figure 6, the words highlighted in red have the most keywords (24 nodes), followed by the green ones (21 nodes) and the few ones are grouped in the blue colour (12 nodes).

The connections between the nodes on the map are made in the form of curves of different sizes. These dimensions are influenced by the frequency of using that link between nodes. Also, this links also influence the positioning of the nodes on the map; the closer they are, the stronger the connection between them. According to figure 6, the most common links are created between words such as 'risk attitude,' 'decision,' 'firm,' 'knowledge,' 'entrepreneurial intention,' 'performance,' 'culture,' 'resource' and 'skill.'

Furthering in this analysis we have made a representation of these nodes based on the periods of time from which they began to be used. The graphic from figure 7 shows a difference in the representation of the nodes on the map. The connections between them are also based on curves of different sizes, but those are influenced by the period of time from when they were used. Their positioning on the map is achieved by the strength of the link. The program grouped the keywords into 3 clusters, and their color is influenced by the period of time from when they were predominantly used. The 3 clusters



are grouped as follows: on the left side of the figure are the nodes in cluster 1 (24 keywords), on the left are grouped nodes in cluster 2 (21 keywords), and in the upper part, the most few knots (12 keywords).

In this analysis we observe changes in the research fields as the specialists have reoriented their research area. In the period 2013–2014, the specialists used in their studies keywords such as ‘organization,’ ‘market,’ ‘firm,’ ‘decision,’ ‘financial risk,’ ‘enterprise,’ ‘effort,’ ‘population,’ ‘resource.’ Subsequently, in the period 2014–2015, the focus was placed on keywords such as ‘uncertainty,’ ‘entrepreneurial orientation,’ ‘gender,’ ‘account,’ ‘employment,’ ‘performance,’ ‘management,’ ‘risk attitude,’ ‘creativity,’ ‘skill.’ The lightest colours are used in the period 2015–2016. Within this period there can be found words like: ‘entrepreneurship education,’ ‘entrepreneurial intention,’ ‘achievement,’ ‘goal,’ ‘behaviour,’ ‘field,’ ‘innovativeness,’ ‘knowledge,’ ‘culture,’ ‘evaluation,’ ‘willingness,’ ‘barrier,’ ‘problem,’ ‘economic growth,’ ‘own business.’

## Conclusions

Entrepreneurship is a key activity in the process of sustainable development of the economy, and has an important contribution to the process of innovation. Furthermore it is perceived as a risky activity, which has led many scholars to focus on studying the different aspects of the risk – entrepreneurship relationship.

Subsequent to analysing the role of risk management in the entrepreneurial activity, the researches focused on correlating the risk attitude with the entrepreneurship activity both through the performance of the obtained results and as influence on the decisions of the entrepreneurs. Thus, this paper, based on the bibliometric analysis of all the papers resulting from the query of the Web of Science database using the keywords ‘risk attitude’ and ‘entrepreneurship,’ analyses the number of papers, the top authors most interested in researching the influence of the risk attitude in the entrepreneurial activity, the journals with the highest contributions, the period of time in which the most studies and citations were performed, but also the most common keywords used by specialists.

The research results showed that the period in which the researchers have done the highest number of papers and have quoted the most number of papers is 2016–2019. The most significant contributions to this research area were made by Small Business Economics journal. From the analysis of the authors of the studies it was found that Frossen Frank M. and Thurik Roy, two university professors, contributed with the most studies, but, cumulatively, the highest

share of the number of studies has been done by European authors (61.55% of the total analysed studies).

By analysing the keywords based on the vosviewer program, we highlighted the direction in which the interest of the researchers has been oriented over time. During 2013–2014 they analysed the market, the financial risks, the effort made by the entrepreneurs, the influence of the pollution, the allocated resources, and from 2014 to 2015, the researchers orientation deepened on studying the structure of the companies, the decisions taken under conditions of uncertainty, the financial performance, the influence of the entrepreneur's gender in the activity of the enterprise. Subsequent to 2015, the researchers focused on analysing the influence of entrepreneurial education, innovation, culture, as well as the barriers that entrepreneurs encounter in reaching their goals. Therefore, now, the interest of the researchers tends to analyse the criteria underlying the decisions taken, the knowledge that the entrepreneurs have, the correlation between risk-entrepreneurship-performance, the impact of culture, the use of resources for a sustainable development, and also the main features of the entrepreneurs who represent characteristics of their attitude towards risk.

The current case study has certain limitations due to the processed information only from a single database (Web of Science) that have been filtered (selecting only the articles, review and proceedings paper from 1990–2019). This study, analysis the publications up to 2019, may be useful to other researchers who wish to further analyse the influence of the risk attitude in the entrepreneurial activity and may suggest future research directions, but also to identify the topics and the publications with the greatest impact.

### Acknowledgements

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# Understanding the Consumers' Personal Characteristics as the Starting Point for Targeted Marketing


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Market segmentation and choosing target markets allow companies to distinguish and position their offer and to plan their marketing activities in a manner allowing them to come as close to consumers as possible. A company doing business in a large market soon realises that it cannot supply to all consumers in this market. There can be too many of them, they can differ with regard to their requirements, can be scattered across the market, or their purchasing demands are substantially different. The main objective of the market research, whose main results are presented in the article, was to research consumers' lifestyle, personal values and media habits. The quantitative research method was chosen and the technique of online surveying. The research results will be used as a basis for market segmentation and for creating effective marketing messages and choosing appropriate marketing communication tools in the analysed market.

*Key words:* lifestyle, values, consumer, market segmentation, marketing strategy, media, marketing communication, Croatia

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## Introduction

The core of the contemporary marketing strategy of the 21st century is comprised of segmentation, choosing target markets, and positioning, which is also called target marketing (Vukasović and Jagodič 2017). Companies are learning that mass marketing and marketing of diverse products is becoming increasingly difficult. Mass markets are getting smaller and are disintegrating into hundreds of small markets which are characterised by consumers searching for various products through various sales channels and paying attention to various communication channels. Companies are increasingly accepting target marketing. The latter presents the first step of strategic thinking in contemporary companies. Utilising a deliberate approach to target marketing, companies create the right relationships

with the right consumers. In order for target marketing to be successful, the market has to be researched and the key markets determined, i.e. market segmentation followed by brand, products and services positioning (Vukasović 2018).

Segmentation can be defined as breaking down the market into various groups of consumers. Here, the target group can be found and reached using the right marketing mix (Damjan and Možina 1995). The main element of such a strategy is the focus on one or more narrower segments instead of on the whole market, as companies have limited resources and cannot meet all of the consumers' requirements. A segmented approach to the market brings a significant general advantage to the organisation, i.e. better familiarity with consumers in an individual segment, which means it is able to better adapt to their needs and requirements (Vukasović 2018).

Companies need a lot of data on consumers, their wishes, requirements, and characteristics in order to adapt their marketing activities and be successful in the market. Company management usually does not have direct contact with consumers, does not know them, and consequently does not have all the required data. These data can be obtained with market research; however, they also need to be processed prior to use. One of the methods used for this purpose is market segmentation. The results of such processing are appropriate for creating a general picture on the situation in the market and product positioning, as well as for strategic decisions on the development of new products or groups of products. Due to the growing competition in the market and consumers with increasingly complex demands, the bases for market segmentation are becoming more and more complex and segmentation more and more difficult. For this reason, researchers involved with market segmentation began using statistical methods of classification into groups (Solomon, Bamossy, and Askegaard 1999; Kotler 1998; Vukasović 2018).

The main advantages of market segmentation are (McDonald and Dunbar 1995):

- Recognising differences between consumers represents the key to successful marketing, as it enables a more optimal meeting of consumers' needs and desires with the products offered by the company;
- Market segmentation leads to a concentration of company resources in markets where the company's competitive advantage is the most evident and revenue the highest;
- Market segmentation can be used as a way of achieving com-



petitive advantage by analysing the market differently than the competition (the company chooses its own criteria);

- Market segmentation allows the company to more quickly and effectively implement marketing activities in specific market segments as a specialist and ensures the achieving of competitive advantages of its products through a better understanding of the consumers' needs and desires.

So, why is market segmentation so useful in marketing? Market segmentation is useful in all elements of the marketing mix. It is useful in promotional activities, as advertising, which is supported with market segmentation, plays an important role in product positioning. When it comes to distribution, buyers differ with regard to where they wish to buy. Income segmentation determines the prices of the products with regard to who is buying them. Who the product is intended for also has to be kept in focus when designing the product (Mumel 1999).

## Literature Review

### MARKET SEGMENTATION AND BASES FOR CONSUMER MARKET SEGMENTATION

Segmentation confers to a part of a whole market that requires identifying customers' product needs, grouping them with similarities (Bainess, Fill, and Page 2010; Hawkins, Mothersbaugh, and Mookerjee 2010; Kegan and Bhargava 2010). Segmentation requires narrowing down the macro market into common subsets (Peter and Olson 2013). Geographic, demographic and psychographic phenomena are the bases of segmentation (Kotler et al. 2013). Also, markets must have boundaries (Kamakura and Russell 1989; Natter et al. 2008) to be highly impacted and well defined (Davies and Brooks 1989) having product preference (Dibb and Simkin 1991; Hassan and Craft 2012; Islam 2020).

Targeting means assessing lucrative parts of the markets (Kotler et al. 2013) being distinct, accessible, measurable and profitable uncovered by competitors (Bainess, Fill, and Page 2010). Targeting involves looking for the right segments to offer products, undertaking standardized, concentrated and differentiated offers (Kegan and Bhargava 2010). Besides, targeting indicates developing measures of attractiveness and finalizing the target markets (Kotler et al. 2013). This also needs to be specific, organized, cost-efficient and effective (Dibb and Simkin 1991; Islam 2020).

Depending on the crucial factors, marketers must decide whether

to undertake broad targeting through mass marketing and differentiated marketing whereas narrow targeting needs niche marketing (Kotler and Armstrong 2016). Additionally, Porter (1985) has mentioned five factors to be considered for targeting suitable segments that include a rivalry, new entrants, substitutes, bargaining power of buyers and suppliers (Islam 2020).

Positioning implies marketer's decision and activities designed to focus and uphold a certain concept in customers' mind (Kegan and Bhargava 2010; Pride and Ferrell 2010). Specifically, positioning strategies include, designing superior customer value in line with quality and price (Kotler and Armstrong 2016; Islam 2020). Positioning, of course, represents a unique feature of a product, shaping the consumer preference, that results in brand loyalty (Fuchs and Diamantopoulos 2010) with a focus of customers' needs, expectations and priorities (Ernst, Hoyer, and Rübсаamen 2010; Fuchs and Diamantopoulos 2010). Positioning highly relies on assessing the needs of targeted segments (Johnson 1987) characterized by price sensitivity (DeSarbo, Ramaswamy, and Cohen 1995). It also represents the 'sharp end' for marketers compared with the closest competitors (Ries and Trout 1981) and a variable parameter taken as granted in customers' view (Dibb and Simkin 1991). However, a viable threat takes place when competitors replicate positioning variables (Moe and Fader 2001; Islam 2020).

The variables which describe market segments are chosen from the group of variables which represent the basis for segmentation (geographic, demographic, etc.), while consumer variables can also be used. The description and formation of segments means that each segment is described with all available and interesting variables (Vukasović 2018).

Groups of variables (Vukasović 2020):

- Descriptive variables: demographic, socioeconomic, psychographic, occasion of use;
- Behavioural variables: benefits sought, desired usage, purchasing patterns and loyalty, participation in the decision-making and dissemination process, brand attitude, sensitivity to marketing mix elements.

Market segmentation using descriptive variables means that consumers are first classified into segments with regard to their characteristics (age, gender, lifestyle, income, etc.) and we then check whether they differ in terms of behavioural variables. Descriptive variables are more easily accessible and individual groups have al-

ready been formed, which means that it is easier to assess the size of the segments. In segmentation according to behavioural variables, consumers are first classified with regard to behavioural characteristics and the segments are later described with descriptive variables. This second procedure is believed to be better, as market segmentation is prepared on the basis of consumers' requirements and the so-obtained segments present a better basis for the preparation of the marketing mix (Žiberna 2002; Vukasović 2018).

Despite the predominantly similar criteria for market segmentation, another author needs to be mentioned who proposes slightly different criteria for market segmentation. According to Wind, the following variables are the most frequently used basis for market segmentation (Damjan and Možina 1995):

- For general understanding of a market: benefits sought, product purchase and usage patterns, consumers' needs, brand loyalty or a hybrid of the above variables.
- For positioning: product usage, product preference, benefits sought or a hybrid of the variables above.
- For new product introduction: response to new products (intention to buy, preference over current brand, etc.), benefits sought.
- For pricing decisions: price sensitivity, deal proneness, price sensitivity by purchase/usage patterns.
- For advertising decisions: benefits sought, media usage, psychographic or lifestyle, a hybrid of the variables above and purchase/usage patterns.
- For distribution decisions: store loyalty and patronage, benefits sought in store selection.

The above-mentioned variables are rather specific and situation-bound. They emphasise the consumers' responses or their responsiveness to marketing stimuli.

When preparing market segmentation, we include various variables which determine the characteristics of individuals who we then combine into groups with regard to common characteristics. These represent the target groups of a company's marketing strategy. There are countless combinations of including variables (from demographic to more complex ones which describe the consumer's behaviour). However, market segmentation does not suffice for a good marketing strategy. We need to develop products and services which can be positioned in the chosen segments. Market segmentation and product positioning have to be developed simultaneously (Vukasović 2018).

Market segmentation can be successful and useful for preparing the marketing strategy if the following criteria are met (Solomon, Bamossy, and Askegaard 1999):

- Consumers within the segment are similar to one another in terms of product needs, and these needs are different from consumers in other segments;
- Important differences among segments can be identified;
- The segment is large enough to be profitable;
- Consumers in the segment can be reached by an appropriate marketing mix;
- The consumers in the segment will respond in the desired way to the marketing mix designed for them.

Throughout the years of developing different theories, marketing experts have developed every possible configuration of segmentation and combination of variables for achieving the best possible and most appropriate profile of the main groups of consumers. However, changes in consumers' lifestyles and other characteristics of the population bring new marketing opportunities. In order for segmentation to be successful, establishing connections between consumers who have the same or similar lifestyle has also proven to be effective, as these data are more relevant than the basic demographic and geographic data and actually express similarity (Vukasović 2018).

One of the most famous and popular market segmentation systems on the basis of values and lifestyle was developed at an American research institute (VALS – Values and Lifestyles). The system is based on Maslow's hierarchy of needs and the theory by the sociologist David Riesman who distinguishes between people, who value personal expression and individual taste, and people, who tend to be swayed by the behaviour and reactions of others (Solomon, Bamossy, and Askegaard 1999).

Market segmentation discovers opportunities which represent the market segment for individual companies. The company needs to assess various segments and decide on how many and which segments to focus.

## Materials and Methods

### METHODOLOGY, DATA COLLECTION AND SAMPLE

The quantitative research method was chosen and the technique of online surveying. Surveying was performed using an online survey. The link to the survey was sent to the respondents' email addresses. The questionnaire was substantially the same structure as

TABLE 1 Respondents' Characteristics

Category	Group	f	%
Respondents' age	Up to 24 years old	27	12
	25 to 34 years old	69	32
	35 to 44 years old	73	33
	Over 45 years old	50	23
	Total	219	100.0
Respondents' status	Secondary school student	2	1
	Student	12	5
	Employed or self-employed	170	78
	Unemployed	21	10
	Retired	2	1
	Other	12	5
Total	219	100.0	
Field of employment	Economic sector	99	58
	Public sector	71	42
	Total	170	100.0

in Vukasović (2018) but conducted on different market and different population.

262 respondents participated in the study. 219 respondents provided their gender. Of those there were 77 male respondents (35% of respondents) and 142 female respondents (65% of respondents).

So as to facilitate the assessment of respondents according to age, they were classified into four age groups. Table 1 presents the four age groups of respondents. The highest share of the 219 respondents belong to the 35 to 44 age group, i.e. 73 respondents or 33% of all respondents. This is followed by the group of respondents belong to the 25 to 34 age group, i.e., 69 respondents or 32% of all respondents.

Before the implementation of the study, the following hypotheses were formulated:

- H1 *The most important values determined by the respondents are being fair and honest.*
- H2 *The most emphasised values determined by the respondents are honesty, reliability and respect.*
- H3 *The most popular topics that respondents follow on a daily basis are global news, information on work, studying, and leisure time, economy and finance and news from country.*
- H4 *The most frequently used media through which respondents obtain the majority of information are tv channels, web portals and social networks.*

## Results and Discussion

Analysing the respondents' status, table 1 shows that the majority of the respondents (170 or 78%) provided employed or self-employed as their current status. This is followed by the unemployed (21 respondents or 10%), and students (12 respondents or 5%).

170 respondents provided their answers on the field of employment. The majority, i.e. 99 respondents or 58%, work in the economic sector, while 71 respondents or 42% work in the public sector (table 1).

The research focused on consumer's lifestyle and personal characteristics, to the attitude towards different personal values or things which consumers see as the guiding principles which give meaning to their lives. The respondents answered our question using a five-point Likert scale, with 1 meaning that a statement does not apply to the respondent at all and 5 that a statement fully applies to the respondent. The respondents could freely choose a number from 1 to 5.

Table 2 shows the respondents' attitude towards different personal values or things which the respondents see as the guiding principles which give meaning to their lives. 227 respondents answered the question. The most important values determined by the respondents were safety of loved ones. This statement was chosen by 175 (77%) respondents. The respondents also being fair, honest very important. This statement was chosen by 162 (71%) respondents. According to the respondents, the least important characteristic is the traditional division of roles into male and female roles. These results allow us to reject hypothesis 1 ( $H_1$ ) that 'The most important values determined by the respondents is being fair and honest.'

The next set of statements refers to the respondents' personal characteristics. The respondents had to indicate their level of agreement with an individual statement. A five-point Likert scale was used, with 1 meaning that they completely disagree with a statement and 5 that they fully agree with it.

Table 3 presents the respondents' personal characteristics. This question focused on the respondents' personal characteristics. 224 respondents answered the question. 108 respondents (48%) find cooperation, help, and encouraging others to be very important. 99 (44%) respondents value different opinions, are willing to accept additional information and knowledge, and upgrade existing knowledge through research. 95 (42%) respondents are organised, responsible, and persistent.

TABLE 2 The Respondents' Attitude towards Different Personal Values or Things which the Respondents See as the Guiding Principles Which Give Meaning to Their Lives

Values	<i>f</i>	%	$\bar{x}$
Safety of loved ones	175	77	4.7
Being fair, honest	162	71	4.7
Doing things I love	151	67	4.6
Helping others	130	57	4.5
Equal opportunities for all	111	49	4.3
Achieving a higher standard	96	42	4.3
Exciting experience	60	26	3.9
Having fun	56	25	3.9
Material goods, having a lot of money	54	24	3.9
Being different from other people	49	22	3.7
Living according to principles dictated by religion	48	21	3.2
Maintaining tradition	23	10	3.2
Traditional division of roles into male and female roles	12	5	2.1

TABLE 3 Respondents' Personal Characteristics

Characteristics	<i>f</i>	%	$\bar{x}$
I am a cooperative person, I like to help, and encourage others.	108	48	4.4
I am inquisitive, of a vivid imagination, I appreciate different opinions and ideas.	99	44	4.3
I am responsible, organised, persistent.	95	42	4.3
I am thorough in my work.	89	40	4.3
I am considerate and kind to almost everyone.	87	39	4.2
I appreciate artistic and aesthetic experiences.	74	33	4.0
I am original and often come up with new ideas.	70	31	4.1
I am effective in what I do.	64	29	4.1
I am talkative.	53	24	3.7
I remain calm in stressful situations.	52	23	3.9
I forgive people easily.	37	17	3.5
I am often worried.	18	8	3.1
I quickly get nervous.	7	3	2.5

The study further focused on the values with which the respondents associate their personality. The respondents could choose a maximum of five values.

Table 4 shows the values which the respondents associate with themselves. The six most frequently chosen values are shown. We were interested in the relation between the chosen value and the respondents' gender. Honesty is the most emphasised value. 45 (34%)

TABLE 4 Values with which the Respondents Associate Their Personality

Values	Male		Female		Total	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Honesty	45	33.83	88	66.17	133	100
Reliability	34	28.57	85	71.43	119	100
Respect	33	29.46	79	70.54	112	100
Flexibility	33	35.87	59	64.13	92	100
Ambitiousness	32	37.21	54	62.79	86	100
Originality	6	28.57	15	71.43	21	100
Total	183	32.50	380	67.50	563	100

men and 88 (66%) women chose this value. The second most frequently chosen value is reliability, which was chosen by 34 (29%) men and 85 (71%) women. 33 (29%) men and 79 (71%) women chose the value of respect. In light of the data obtained with our study, we can say that the percentage of positive personal values is higher among women than it is among men. The lowest number of respondents, i.e. 6 (28%) men and 15 (71%) women, chose the value of originality as the least important. These results allow us to confirm hypothesis 2 (H<sub>2</sub>) that 'The most emphasised values determined by the respondents are honesty, reliability and respect.'

The next set of questions refers to the following and use of media in respondents' everyday lives.

We established the most popular topics that respondents follow on a daily basis:

- Information on work, studying, and leisure time (175; 78%);
- Global news (155; 70%);
- News from country (154; 69%);
- Economy and finance (151; 68%);
- Local information (147; 66%);
- Science and technology (141; 63%).

The highest share pertains to topics associated with information on work, studying, and leisure time. These results allow us to confirm hypothesis 3 (H<sub>3</sub>) that 'The most popular topics that respondents follow on a daily basis are global news, information on work, studying, and leisure time, economy and finance and news from country.'

It was further established that web portals, tv channels, search engines, and social networks are the most frequently used media through which respondents obtain the majority of information with regard to individual fields (table 5). These results allow us to con-



TABLE 5 The Most Frequently Used Media as a Source of Information for Individual Fields

Fields	(1)	(2)	(3)	(4)	(5)	(6)	(7)
News from country	55	7	4	105	23	25	218
Local information	21	24	14	96	21	42	218
Global events	51	5	6	115	23	18	218
Information on work, studying, and leisure time	7	1	5	123	64	18	218
Sports	67	6	5	100	19	21	218
Crime section	42	5	26	103	25	17	218
Employment and social affairs	24	3	7	115	53	16	218
Science and technology	31	4	2	131	41	9	218
Economy and finance	43	5	7	116	40	7	218
Culture and art	45	7	10	105	31	20	218
National politics	80	8	7	91	19	13	218
International politics	72	4	7	102	22	11	218

NOTES Column headings are as follows: (1) TV, (2) radio, (3) print media, (4) web portals, (5) search engines, (6) social networks, (7) total.

firm hypothesis 4 (H4) that 'the most frequently used media through which respondents obtain the majority of information are TV channels, web portals and social networks.'

## Conclusion

The most important objectives of market segmentation are creating a strategy which will bring the highest possible profit with minimum costs and allow us to achieve the desired market share and competitive advantage. After a certain time, the company has to review its strategy and adapt its target segments to the new situation in the market. In addition to the correct choice and positioning in the market, the right communication with the chosen target groups is also important, i.e. by adapting individual elements of the communication mix with regard to their demographic and behavioural characteristics. Companies can use a number of various media to transfer information and influence the consumer's purchasing decisions. The best results are achieved if companies know how to correctly combine various media. In order to choose the right combination, the company has to know the characteristics of individual media and combine them so as to utilise their advantages and communicate messages to consumers with which it affects their purchasing decisions. The study focused on the consumers' lifestyle, personal values and media habits. The research results will be used as a basis

for market segmentation and for creating effective marketing messages and choosing appropriate marketing communication tools in the analysed market.

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# Employee Training and Education

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In the past, it was paramount for employers that employees were obedient and followed the instructions, while today they are expected to bring added value to the organization in terms of knowledge, experience, skills and innovation at work. All this is acquired through training and education throughout the life of the employees. The research was intended to check how organizations understand employee training and education. We were particularly interested in the transfer of skills to newly hired employees during the probationary period. Based on the conducted research, we have confirmed our hypothesis that the majority organizations choose trainings during the probationary period.

*Key words:* employee training, education, transfer of skills, organization, HRM

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## Introduction

In the past, the most important thing for employers was that the employees blindly followed the instructions of their superiors, were obedient and responsive. Today, employees are expected to bring new knowledge, experience, skills to the organization and to be as innovative in their work as possible. All this gives the organization new added value and increased competitiveness in the market. We all learn throughout our lives, whether at home, at work or anywhere else. Particularly, we acquire a great deal of expertise through training or education in our work environment. It is here that organizations are working hard to get a new employee (or existing one) trained for a (new) job as well as possible so that he or she can work independently as soon as possible and that his or her job is successful.

We have methodologically prepared the content of the article – we have used a qualitative and quantitative research method. We also used primary and secondary data sources. They were obtained

from pre-existing literature and through a questionnaire. The research work was divided into theoretical and empirical part, where different research methods were used for each.

The purpose of the research was to investigate and determine which method of training is most commonly used by Slovenian employers. Then, through research and analysis, interpret the obtained data and verify compliance with our hypothesis.

We set out the following hypothesis:

H1 *Slovenian employers, as the most common method of on-the-job training, use training during the probationary period.*

We assumed that the heads of human resources or departments of human resources management of Slovenian organizations are ready to participate in the survey and the data obtained will be honest, especially since it is an anonymous survey. We also assumed that the information obtained would allow us to refute or confirm our hypothesis. We saw the limitations of the survey mainly in the non-response of the respondents, which could affect the sample representativeness. We have taken care of the latter in a way that we have covered more Slovenian organizations and ensured the adequacy of communication through various communication channels. We also saw limitations in a large number of incompletely filled surveys, which we tried to solve by designing a questionnaire that was transparent and least time-consuming.

### **A New Employee Employment and Recruitment**

The recruitment of a new associate begins when the selection is completed. When we submitted the proposal to the selected candidate, we also made a crucial first step. This is followed by a referral to a medical examination, signing of a contract and registering a new associate for compulsory pension and disability health insurance. This also begins the employment relationship and the introduction of the individual into the work environment.

Employee deployment is one of the most important processes for the development of an individual, with which our purpose is to achieve the overall success and effectiveness of the associate and his/her ability to perform work independently. For these reasons, deployment must be organized at a high professional level, planned and very systematic. Only with such deployment can the employee be expected to perform their duties independently. At the same time, he or she will be satisfied, innovative and able to adapt to changes in the new environment (Mihalič 2006, 168).

Starting a new job presents stress to the individual and it can also be a difficult process. The new associate must begin to face new tasks while getting used to the new organization, work environment, co-workers, and sometimes new living environments as quickly as possible. And in all this, the process of introducing an individual is of great help (Coleman 2013).

In practice, employers decide to introduce employees upon their employment. However, they forget that it is also advisable to do so when working methods change, with horizontal promotion or when redeploying existing employees to other jobs. Each job has its own work process, its responsibilities, procedures etc. (Mihalič 2006, 168).

### Steps for Introducing Employees

There are differences between systematic approaches in practice. It is mainly about the different complexity of individual work tasks, as well as the fact that organizational structures differ from organization to organization. At the same time, whether we are introducing a new employee or an existing one plays an important role. The latter requires shorter introductions, while the former need longer and more in-depth work. Regardless of what is written, certain basic procedures must be followed in each deployment (Mihalič 2006, 169). However, it should be remembered that systematic introduction to a new environment can significantly shorten the process of socialization or enable an individual to achieve the expected results faster (Svetlik 2002, 166–7).

For a newly hired person, the first introduction step is a preliminary introductory interview. It is provided by the human resources department on the first working day of the employee. This step is referred to as *the macro deployment level*, as the newly recruited person acquires a wide range of information, namely: basic information of the organization, organizational structure, organizational units, core products or services of the organization etc. The employee is also made aware of all the rights and obligations applicable to all employees (e.g. code of ethics, working hours, social security, breaks, annual leave, etc.). It is certainly important that the introductory interview is conducted in a relaxed and friendly spirit (Mihalič 2006, 169–70).

The second step is called *the mezzo deployment level* and involves a preliminary introductory interview between the new employee and the head of the organizational unit. The purpose of the interview is to give the new associate a closer look at the organizational unit structure, its organization and functioning (Mihalič 2006, 170).

The third and final step is called *the micro level of deployment* and is performed by the directly superior, sometimes also the associate who will be in charge of the deployment. During this level of deployment, the new employee becomes familiar with the deployment plan and program, with well-defined rights, duties and obligations. We can also give him a more detailed insight into the characteristics and types of tasks, as well as introduce him to the work post, colleagues, team members ... After that a regular introduction begins for the new associate (Mihalič 2006, 170).

### Employee Deployment Contractors

The introducer is the person who plays the most important role during the deployment of an existing or new employee. He or she is responsible for successful and efficient implementation. At the same time, it ensures that the program and the plan are implemented as correctly and systematically as possible. When selecting an introducer, the directly superior is the best option, especially in terms of avoiding separation between introduction and management. At the same time, there is no duplication of delegation, organization of work, reporting and questioning of responsibilities (Mihalič 2006, 172).

The deployment process should be organized and standardized in every organization, but many times that is not the case. Too often it happens that a new co-worker is left to be introduced to random disinterested co-workers, or even to himself, because he is not introduced by anyone and forced into self-introduction. Such deployments pose a high risk to the organization, since the new associate can take over the rules, habits, way of working, etc. which are introduced in the working group, but they are often completely inadequate or incorrect. Introductions that begin in this way are absolutely inadequate (Mihalič 2006, 172–3). If the implementation is not done well, the negative consequences may also be that the employee does not know for a long time in what kind of organization he is working, is not satisfied with the work, has no motivation to work, does not know his role in the organization, it does not integrate into the organizational culture, perform worse and not identify with the values of the company (Florea 2014, 13–23).

### Employee Deployment Program and Plan

Deployment programs are prepared by the introducer in collaboration with the HR department and differ depending on whether we are introducing a new associate or an existing one. A great difference



in the program is the complexity of the job, including the degree of complexity of skills that an individual has to have to perform their job and tasks effectively. Each deployment program should be divided into two parts, the general part and the professional part, with the general part covering e.g. the following (Mihalič 2006, 173–4):

- basic information of the organization,
- presentation of the organization's activities,
- presentation of the organization's products or services,
- acquaintance with main rights and obligations that apply to all employees,
- getting acquainted with main rights and obligations related to the associate's working post,
- presentation of basic organizational units and organizational structure,
- complete organization tour and individual units,
- presentation of the organization's management and individual leaders,
- introducing new colleagues,
- presentation of the program and the deployment plan,
- accurate presentation of the job, its characteristics and requirements,
- presentation of work equipment,
- acquaintance with the safety at work of the chosen workplace,
- acquaintance with the possibility of promotion, rewards, additional education, etc.

The above list is valid only when a new associate is hired. The introduction of a co-worker who was reassigned, or in the same workplace only changed the methods or procedures of work, shortens the list significantly.

The content of the professional part cannot be generally defined. This part depends on the type of job tasks of the particular job, the complexity of the job, the education required for that job, the competencies that the associate needs, and so on. Therefore, only the following points can be identified (Mihalič 2006, 174):

- become familiar with all procedures and processes related to the employee's workplace,
- learn about ways of performing work effectively,
- get to know all the associates he will work with,

- learn how to properly use work tools, appliances and accessories,
- get to know what regulations, acts and regulations it must follow,
- get to know what criteria and standards for excellence and good work are relevant to his or her workplace,
- get to understand the role and importance of his/her work tasks at the level of success of the whole organization and
- to find out what occupational safety requirements apply to his/her workplace and what are the ways of protecting the health of self and colleagues.

It is necessary to keep in mind that all those tasks that the employee will have to perform independently and those he/she may encounter after the completion of the introduction (Mihalič 2006, 175) should be included in the professional part of the deployment program.

The individual tasks and phases in the professional part of the deployment program need to be defined in the plan. The duration of the program depends entirely on the complexity of the work tasks for which the individual is being introduced. However, it should be borne in mind that the input energy and time of the introducer are the ones that contribute to deployments quality (Mihalič 2006, 175). It is important that an evaluation is carried out after the end of the program so that the content of the program can be improved in the future (Coleman 2013).

### **Developing Employees Training and Education**

The new age and knowledge management have also brought changes in employee training. If once knowledge gained in school was enough for employment, that is no longer the case today. Today employees are expected to constantly upgrade and supplement their knowledge, gain new experience and skills, and help the employer to achieve the set goals. It is also expected that, when hiring, we will integrate as quickly as possible into the work environment and, during the introduction and training, will acquire the necessary knowledge to work as independently as possible in the chosen job.

In practice, in modern times, when we talk about education, we often come across related terms, such as perfecting, training, continuing education, lifelong learning, and more. The denominator is the same for everyone, all of them are planned, goal-oriented and practical knowledge acquisition (Mihalič 2006, 188), separated only

by minimal differences. However, all of them are related to the professional, work and personal development of individuals, as well as their efficiency in work tasks and performance (Dermol 2010, 31). The role of training is therefore to impart knowledge, perfect knowledge, develop individuals and change behavior.

However, before proceeding, let's look at the mentioned differences (Mihalič 2006, 190):

- Education is a systematic and planned process. The employee develops and acquires general, professional, and scientific knowledge, skills, habits, abilities and other competences.
- Perfecting is a process that is carried out in a systematic, planned and targeted manner. The employee supplements, changes, deepens, expands and systemizes previously developed general, professional, including scientific knowledge, skills, habits, abilities and other competences.
- Training is the process by which an employee develops and acquires specific knowledge, skills, habits, abilities and other competencies. All that is needed is the employee to be able to perform his work successfully and efficiently.

Let's look at what differentiates training from deployment (Jereb 2002, 175–212):

- Training can be understood as an intermediate stage between education and work or as additional training for those skills and habits that are required to perform a particular job within the whole of an activity.
- Deployment on the other hand, is more focused on enabling effective recruitment of new employees and those employees whose working conditions have changed. It refers to learning about the basic processes, customs and rules in an organization that allow a newcomer to be able to integrate with them qualitatively.

Knowledge can be acquired in many ways, but theoretically classified as internal and external. We both know different forms, namely: independent or individual training, perfecting and education, teamwork, teamwork and a combination of all of the above (Mihalič 2006, 190).

Subsequently, it is sensible to further specify which types of knowledge acquisition are fundamental in the context of internal training, perfecting and education, and which in the external. Internal trainings, perfecting and educations are (Mihalič 2006, 190):

- training during the practice,
- new employee training during the probationary period,
- employee training of during internships,
- employee training at work and on the job,
- training (and education) during the deployment of new employees or associates;
- internal training, perfecting and education that are functional in nature.

External trainings, perfecting and education are as follows (Mihalič 2006, 191):

- training in courses, seminars, conferences, symposia, professional lectures etc.,
- freelance training, further training and education,
- education on and off the job and
- external training, perfecting and education that are functional in nature.

Each training is recommended to be carried out systematically. Such approach enables the training and development of the individual to achieve its purpose and to follow the logic of carrying out successive steps. A systematic approach or training is a four-stage process that consists of (Vuković and Miglič 2006, 71):

- analyzing training needs,
- developing training plans,
- realization of plans or implementation of training and
- evaluation of results or evaluation of training and obtained results.

### **Modern Forms of Training, Perfecting and Education**

Nowadays, modern forms of education include: e-education or distance education, simulation education, rotational training or rotation, extreme education, role-playing and case study, frontal formats, programmed learning, on-the-job method, 4-step method, case study, coaching, etc. All forms are quite widespread, but the choice depends on the type and purpose of the organization (HR 2001).

In Slovenian and especially international organizations, they often use simulation training or education to acquire new knowledge. This format is about acquiring knowledge based on the simulated diverse situations that employees face on a daily basis inside or outside the

company in the course of their work. Most often, this type of education is used in teambuilding, employee training, when we want to research and determine how our co-workers or employees will react in crisis situations or to potential changes etc. (Mihalič 2006, 191).

In organizations that also deal with the development of their employees, they most often choose a form of training called rotation. Rotary training is particularly relevant when developing future leaders, as they require a wide range of skills. We also choose to rotate if we want to develop members of effective teams. In this case, the rotation objective allows each member to replace the other member. This form of gaining new knowledge is best reflected in cases where we need to allocate employees to jobs where it should be considered that we rotate each individual to the position that is appropriate for him and for the organization. Namely, it is precisely during the course of a replacement that it is most often shown that an individual is much more successful in the workplace, where he or she would not be allocated at first (Mihalič 2006, 191).

### Research and Management Suggestions

Our research, among other things, was intended to investigate and determine which method of on-the-job training is most commonly used by employers and to verify our hypothesis by analyzing and interpreting the data obtained.

#### METHODS AND CHARACTERISTICS OF THE SAMPLE

We used quantitative research for verification purposes. The survey was conducted with the help of a survey questionnaire, which was created in the web application 1KA. To interviewed companies we sent an e-mail to their publicly available e-mail addresses explaining the purpose of the survey and adding a link to access the survey website, specifically to the heads of human resources and heads of human resources management departments.

The sample or population was represented by Slovenian companies of different sizes and selected activities, which were published in the electronic format of TDS (Telephone Directory of Slovenia), while trying to follow the structure of entities in reality (company size). 5,000 companies from different industries were randomly selected. The survey was conducted between June 30 and July 9, 2019. 830 (16.6%) respondents answered the survey and 339 (6.78%) respondents filled it out.

The collected data were analyzed using the SPSS software tool, and the results were presented using tables. Descriptive statistics were

TABLE 1 Overview of Survey Completion Data with Respect to Completion of Survey Completion

Completed	Partially completed	Total appropriate	Total inadequate	Total
284	55	339	491	830

used to determine the characteristics and composition of the sample, and the hypothesis was tested using inferential statistics. First we used the calculation of  $\chi^2$  for the variables tested and their distributions, but since the latter was not uniform, we used the largest percentage of the possible answers to test the hypothesis.

The limitations of the survey were, in the end, reflected in the respondents' perceived unresponsiveness and in the large number of incorrectly or incompletely filled surveys.

#### BASIC ANALYSIS OF DATABASE VARIABLES

First we asked the respondents about the industry, size and age of the company, the number of employees and the region of the company's headquarters. A total of 339 questionnaires were completed (table 1). 182 (53.7%) micro, 97 (28.6%) small, 49 (14.5%) medium-sized and 11 (3.2%) large companies participated in the survey. In the sample structure, the proportion of large firms was larger than the structure in reality, but large firms had greater employment needs.

According to the industry 78 (23%) companies come from construction, 62 (18.3%) in motor trade, maintenance and repair of motor vehicles, 39 (11.5%) in manufacturing, 35 (10.3%) in the catering industry, 22 (6.5%) in transport and storage, and 103 (30.4%) in other industries.

According to the region from which the surveyed companies come, 119 companies come from central Slovenia (35.1%), 44 from Gorenjska (13%), 37 from Podravska (10.9%), 35 from Savinjska (10.3%), 23 from Goriška (6.8%), 15 from the Coast and Karst (15%), from Koroška and Notranjska each 13 companies (3.8%), 12 from Posavje (3.5%), 10 and 11 (2.9% and 3.2%) from Pomurje and Primorsko-notranjska and from Zasavje 7 (2.1%). The result obtained is also expected, as the largest number of companies is registered in central Slovenia, and Zasavje region is a rather small area.

Our research hypothesis was: Slovenian employers use training during the probationary period as the most common method of on-the-job training.

In the questionnaire we also asked the respondents which methods are most often used to train (new) employees. Companies had

TABLE 2 Employer-Selected Training Methods

Item		(1)	(2)	(3)	(4)	(5)
Sample	Valid	296	296	296	296	296
	Missing	43	43	43	43	43
Average		3.98	4.20	2.74	3.16	2.60
Asymmetry		-1.168	-1.434	0.209	-0.252	0.328
Standard flattening error		0.142	0.142	0.142	0.142	0.142
Minimum		1	1	1	1	1
Maximum		5	5	5	5	5

NOTES Column headings are as follows: (1) during practice, (2) during the probationary period, (3) during internship, (4) during internal training, (5) courses, seminars, conferences.

TABLE 3 Calculation of  $\chi^2$  for the Checked Variables and Their Distributions

Item	(1)	(2)	(3)	(4)	(5)
$\chi^2$	195.081*	256.568*	47.514*	14.034*	34.034*
Level of freedom	4	4	4	4	4
Asymptotic characteristic	0.000	0.000	0.000	0.007	0.000

NOTES Column headings are as follows: (1) during practice, (2) during the probationary period, (3) during internship, (4) during internal training, (5) courses, seminars, conferences. \* cells (0.0%) have an expected frequency of less than 5. The minimum expected cell frequency is 59.2.

methods listed and each had to choose a value from 1 to 5, where 1 meant that they never used these methods and 5 that they always used them. As can be seen from table 2, the most commonly used method was 'training during the trial period' (4.20). This was followed by the 'training during practis' method (3.98), as the least used companies chose the training method through courses, seminars, conferences, etc. (2.60). This question was answered by 296 respondents. This is also the number of all who answered 'yes,' in the previous question, 'Do you have a process for deployment for a (newly) hired person to your business?'

As shown in table 3, the distribution is not uniform, so we will consider the largest percentage of possible answers to test the hypothesis.

Table 4 shows in numerical terms how many companies chose to use training during the trial period 'always' (160 companies, 54.1%) and 'almost always' (74 companies, 25.0%). According to the result, almost 80% of companies mainly use it.

Training during the probationary period is generally and consistent with the findings of the theoretical part of the article (Mihalič

TABLE 4 Frequency of Employer-Selected Training Methods

Item		(1)	(2)	(3)
Valid	5 (always)	160	47.2	54.1
	4	74	21.8	79.1
	3	36	10.6	91.2
	1 (never)	14	4.1	95.9
	2	12	3.5	100.0
	Total	296	87.3	
Missing	Interrupted	43	12.7	
Total		339	100	

NOTES Column headings are as follows: (1) frequency, (2) percentage, (3) cumulative percentage.

2006, 190), one of the most frequently selected forms of training for new employees. Similar findings can be drawn from our research, so we can confirm the hypothesis.

Almost 80% of the surveyed companies (79.1%) therefore chose training during the probationary period as the most common method of training new employees, which is why we confirmed the hypothesis. The confirmation was expected because, as we have already stated in the theoretical part, Slovenian companies in general use the possibility of probationary employment as an employee training, in which they can judge the success of cooperation with the new employee and their integration into the working environment and adaptability to working conditions, which also means successful knowledge and skill transfer (Florjančič, Bernik, and Novak 2004, 80–81; Papalexandris and Panayotopoulou in Murn and Kovač Zaplotnik 2011, 22–23; Spacey 2018). In our opinion, it is important for the company to get to know a new employee through the probationary period and to explore the possibilities of mutual cooperation in the future of a particular job.

### Management Suggestions

Based on the findings of our research, we suggest that Slovenian employers should continue to decide on the method of staff training during the probationary period. Regardless of the statements of different authors, we believe that the trial work should be entirely based on the organization's best efforts to introduce and deploy a new associate qualitatively and quantitatively into the work environment and to be able to perform new work tasks. Regardless of how well the individual is trained and what kind of experience they have, he is coming to a new environment where new rules apply, a differ-



ent organizational culture is established, and also there are different people. An individual's job performance and his/her early acquisition of the necessary skills, and finally his/her transfer of knowledge to the rest in the group, in the new work environment absolutely depends on his/her training, support of the organization and influence on his/her successful integration. Those organizations that have not yet decided for training for any reason, we suggest that they consider introducing training during the probationary period, thereby improving the involvement of new employees in existing working environments.

## Conclusion

With the help of our research we wanted to research and identify which or what are the training methods most often decided by Slovenian employers. With the help of a questionnaire and a subsequent analysis of the hypothesis we found that the surveyed companies confirmed our hypothesis that they use training during the probationary period as the most common method of training on-the-job staff. This finding is also consistent with the opinions of various authors, who state that such deployment or training is the most optimal for both, the new employee and the company and produces the best results.

Since the structure of our survey sample followed the structure of companies in the Slovenian economy, with the share of large companies in the sample being slightly larger than the real one in the structure of the economy, it can be argued that the findings of our research apply to the entire Slovenian territory.

As mentioned above, the training of new employees within the trial period, based on the conducted research, plays an important role in faster transfer of knowledge, better involvement of new employees in the work environment, and significantly contributes to the transfer of knowledge and skills. In doing so, the organization also provides good practice in connecting existing and new employees.

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# Understanding FDI Spillover Effects: Evidence from North Macedonia

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This paper examines theoretically and empirically the spillover effects of FDI in North Macedonia: The research focuses on the implications from business-to-business (B2B) relations between local companies and multi-national enterprises (MNEs) operating in the free economic zones (FIZ) in North Macedonia: A specially designed survey was conducted with 28 domestic companies, half of which work with the foreign companies operating in the free economic zones in North Macedonia: The statistical analysis is based on the equality tests regarding the sample mean (*t*-test and ANOVA) and median (Chi-square and Kruskal-Wallis test) of the above mentioned two sub-sets of data The research findings suggest that in general FDI encourage stable connections between local companies, suppliers and customers, but do not increase the awareness of local companies about the importance of marketing for their business development. There is also insufficient empirical support for the assumption that cooperation with FDI has significant influence on the investment decisions of the local companies, or that FDI stimulate the search for innovative methods of production and organizational practices. Aside from the direct economic benefits from the presence of foreign companies in a host country, such as capital accumulation, increased employment rates, higher salaries, and better working conditions, it is expected that indirect effects will also occur, desirably in form of productivity spillovers, which will further enhance economic growth and development, as well as promote business environment and competitiveness. Regarding practical implications, these findings can help policymakers and company managers to recognize the different FDI spillover effects on domestic businesses' output. Moreover, policymakers need to encourage the capability of local buyers to integrate the advanced products and services purchased from foreign firms. Furthermore, this study contributes to the existing research base in this field and represents one of the pioneer attempts in the case of RNM. The results gained from the research are very important for companies themselves, but they can also serve as a starting

point for future research to eliminate governmental and other corporate issues related to the relationship between domestic and foreign businesses.

*Key words:* FDI, spillover effects, business environment and competitiveness

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## Introduction

One very relevant aspect for development of the business environment in the economy and promotion of the business-to-business relations, are the foreign direct investments (FDIs). FDIs are in general considered as important source of finances, especially for underdeveloped and developing countries. However, the benefits for the local companies, in terms of increased labour productivity through international transfer of knowledge and technology, are even more important. Strongly emphasizing the indirect effects of the FDIs makes local companies to be often identified as major growth-enhancing factor for the host economy. Developing countries tend to attract prospective companies with offers of tax breaks, subsidies and other incentives to set up green field investments. While these concessions may result in lower corporate tax revenues in the short-run, the economic benefits and the enhancement of local human capital can deliver positive returns over the long-run. Having in mind the afore-mentioned, the aim of this paper is to examine theoretically and empirically the spillover effects of the FDIs in the Republic of North Macedonia. More specifically, in the focus of the research are the implications from business-to-business (B2B) relations between the local companies and the multi-national enterprises (MNEs) operating in the free economic zones in North Macedonia. The key research question is to detect the key driver behind FDI spillover effects. There are assumptions that compared to domestic companies, multinational enterprises often have more advanced technology, employ higher number of skilled workers, and spend more resources on research and development (R&D). This argument is at the same time an essential requirement and precondition for multinational enterprises to expand their production in a foreign country. MNEs have to be more efficient than the local competitors (Buckley et al. 2005). On the other hand, local companies are believed to be more knowledgeable about the domestic markets, the local business environment and local factors of production (Blomström and Kokko 2001;

Blomström and Sjöholm, 1999; Cuyvers et al. 2008). In such a situation, it is likely that different types of externalities occur, causing spillover effects from MNEs to local companies, both within the industrial sector, horizontally, and between sectors (among related companies such as suppliers), vertically.

### Literature Review

The theoretical review on the implications of FDI on the host economy indicates that besides direct implications such as capital accumulation and increased level of employment, important aspect are the positive externalities (indirect implications) that foreign companies might generate in the host economy. However, FDI should not be viewed as automatic growth-generating instrument. Hence, governments should not rush in decisions to attract FDI as much as possible, offering various benefits for foreign investors to move the capital in their countries. It is important to have in consideration that the price paid to attract more FDI inflows might not often pay off, especially from the point of view of the expected indirect effects. The main rationale behind the growth effects of FDI and special incentives to attract FDI is the belief that they produce externalities in the form of technology transfers and spillovers (Carkovic and Levine 2002). Romer (1993) argues that FDI can ease the transfer of technological and business know-how to less developed countries and enhance the productivity of all firms in the host country. In this understanding, although foreign direct investments are not in general considered as important source of finances, especially for underdeveloped and developing countries, the benefits for the local companies become even more important. A strongly emphasized indirect effect of the FDI makes them often identified as major growth-enhancing factor for the host economy. Overall, the positive implications and benefits of FDI are widely recognized. Countries are more focused in creating favourable business environment for foreign investors, thus encouraging increased capital movement across the borders. Areas of positive implications of FDI are often pointed out within the trade effects, human capital contribution, spillover effects, competition level, management practices, and the like. FDI influence economic growth by increasing total factor productivity and the efficiency of resource use in the host country. It increases the capital stock and thus raises the output levels. Also, the contribution to human capital is significant. Multinational enterprises reduce the unemployment and usually provide higher wages and better working conditions (upward pressure on wages in the host economy), due to

their higher productivity, which is explained by greater technological know-how and modern management skills. The transfer of technological and managerial know-how through affiliates also gives rise to direct benefits and increases competitiveness in host countries (Parnell 2014). Guided by the idea to increase the quality of their suppliers, MNEs can also provide technical assistance, training and other information for their local partners, thus causing spillover effects, beneficial for the business environment in the country. The presence of MNEs stimulates domestic competition, thereby leading to higher productivity, innovation, lower prices and more efficient resource allocation. FDI through acquisition of local firms result in changes in the management and corporate governance. MNEs generally impose their own company policies, internal reporting systems and principles of information disclosure, thus improving the business environment and developing the corporate efficiency. Moreover, multinationals may contribute to higher productive efficiency and better use of the existing resources by the local companies. Also, they can impact on breaking down local monopolies and fostering market competition, introduction of new know-how, increase of the managerial efforts of the local companies for adoption of new marketing techniques and search for new technologies (Kokko 1992; Saggi 2002). Navaretti, Venables, and Barry (2004) also argue that FDI will put an upward pressure on the wages in the host economy, especially for unskilled workers. Also, as multinational enterprises often use superior production technology, through on-the-job trainings, FDI can upgrade the skills of the local workers. Given the aforementioned, the host economy can benefit not only directly from the increased productivity, but indirectly, through higher collection of tax revenues, due to the higher wages (Bruhn and Calegario 2014). Overall, it is widely accepted that the entry of multinational enterprises (MNEs) generates a net positive effect on the local firms' productivity in the host countries (Cuyvers et al. 2008).

Although there are strong theoretical basis suggesting positive externalities of the presence of foreign direct investments, empirical literature on the other hand provides mixed results, especially regarding the necessary preconditions for efficient spillover effects. Some of these vital factors are the 'absorptive capacity', democratic political systems, and minimum governance quality of the host economy (Elkomy, Ingham, and Read 2016). Others are related with the host country's capability to benefit from technological spillovers from the more industrialized nations and the ability to accumulate and best utilize technology and knowledge (Narula and Portelli

2004). The main determinant of the 'absorptive capacity' is the quality of institutions, particularly, the rule of law and the property rights protection. However, countries do not always experience the same benefits from FDI. Their contribution depends on the policy and business environment of the host economies. While a foreign investment may be beneficial for one country, it might even be quite harmful for another. Gorodnichenko, Svejnar, and Terrell (2007) do not find any evidence in favour of the hypothesis that technologically more advanced countries will experience greater spillover effects from FDI. Additionally, although business environment in the host economy affects the efficiency of the local companies, the authors find no evidence that it influences the strength of the spillover effects, neither measured by the level of corruption, bureaucracy, or differences in the level of development on regional level.

Given the consensus that FDI inflows have greater importance for the economic growth and development in underdeveloped and developing countries, very often the interest is turned exactly towards those countries. Lalitchandra (2015) supports the thesis that FDI inflows are the most effective source of capital and important factor for economic growth in developing countries, with an emphasis on productivity gains. However, Gerschewski (2013) suggests that there is a tendency of negative intra-industry (horizontal) productivity spillovers in developing countries. The arguments offered in relation to this suggestion are the following. First, the entrance of multinational enterprises on the local market might lead to crowding-out of the local companies. Second, the absorptive capacity of the local companies might not be sufficient to assimilate the knowledge of MNEs. Still, there is evidence of positive inter-industry (vertical) spillover effects, mostly backwards, or directed to the local suppliers and contractors from different industrial sector. Local companies in this case might experience important benefits from their cooperation with multinational enterprises operating in the country.

Focusing on the transition countries, Krammer (2010) shows that the countries from Eastern Europe experience greater productivity gains from the FDI compared to the countries from the Western part of Europe, emphasizing thus the disparities between the two regions. While the capital stock in the Western European countries plays an important role for the total factor productivity, in the eastern countries it is less significant.

As former socialist countries, the Czech Republic and Romania have both experienced great economic development and increased stock of foreign direct investments in the recent years. Javorcik

and Spatareanu (2005) provide comparative analysis regarding the spillover effects of the FDI in these two countries (horizontal and vertical), but they find no evidence of their existence. On the other hand, Jude (2012), for the case of Romanian companies for the period of 1999 to 2007, finds positive backward and negative forward spillover effects. Also, he finds that technological spillovers are positively correlated with the technological gap, whereas for the horizontal spillover effects, labour mobility is the only one significant. Similarly, Stancik (2007), using firm level data for the period 1995–2003 for Czech companies, concludes that domestic companies are in general negatively affected by foreign ones, thus suffering from their presence. He opposes the arguments for subsidization of foreign direct investments, as booster of economic activity, given that he does not find any presence of forward vertical spillovers, whereas horizontal and backward spillovers are negative.

Nicolini and Resmini (2010) investigate the spillover effects in Romania, Poland and Bulgaria. By using unbalanced panel data for more than 40.000 domestic companies from the manufacturing sector, and around 10.000 foreign companies operating in these countries, they tend to provide answers about the existence of indirect effects, whether they occur within sectors or between them, and what factors those determine. They find that spillovers within sectors mostly arise in labour intensive sectors, whereas spillovers between sectors are typical for high-tech sectors. Additionally, they relate the extent and intensity of the spillovers with the absorptive capacity of domestic companies, while the results differ depending on the size and the technological development as well. Vahter and Masso (2004) takes into account the market orientation of FDI in Estonia and Slovenia (local market orientation, or export orientation), in terms of productivity and spillover effects. Namely, he finds that local market oriented foreign companies in Estonia have much higher labor productivity than export oriented, whereas in Slovenia such relationship does not exist. He finds no spillover effects from the FDI to domestic companies in Estonia. On the contrary, there are positive spillovers for local companies in Slovenia, which leads to conclusion that existence of positive spillover effects might depend on the economic development of the host country. Still, there are authors which despite of the provided theoretical and empirical evidences of the spillover effects of the FDI have contrasting claims. Namely, there are cases where empirical research failed to provide support for the hypothesis that FDI inflows would boost the economic activity and improve the business environment of the host



economy. For example, Marin and Bell (2006) failed to identify automatically delivered FDI spillover. Furthermore, they have taken into consideration the absorptive capacities as possible a factor that influences the extent of spillovers, but still, did not find any support for that either. Additionally, they associate spillover effects with investments of domestic companies in capital embodied technology, as well as with skill training, even though to lesser extent, while in contrast, research and development investments are found unimportant. Therefore, they question the relevance of the whole R&D based governmental policies. In this regards, Karahan (2016) investigates the relationship between FDI inflows and economic growth in Turkey and finds no positive spillover effects of FDI. He concludes that benefits from attracting FDI in developing countries do not occur automatically and without additional efforts. Therefore, the suggestion is that policy makers in the host economy should focus equally on attracting FDI and on improving local economic conditions and business environment. For the case of North Macedonia, referring to United Nations Conference on Trade and Development, Jovanovikj (2016) underlines that linkages between domestic and foreign companies in North Macedonia are in general weak, especially for export oriented Greenfield investments, which import most of the production inputs. For existing companies acquired by foreign investors, there is a reverse situation, or tendency to upgrade already established linkages with domestic suppliers. As for the transfer of technology, it is pointed out that it usually happens through import of advanced technology from the mother company. Unfortunately, it remains within the circle of the MNE, given the abovementioned limited linkages with local companies. As recommendation to expand the technological transfer out of the circle, to local companies, the author argues for collaboration between universities and industries, as well as establishment of high-tech zones for enhancing horizontal and vertical channels of collaboration between companies. Johnson Matthey is depicted as a positive example of potential spillover effects. Dzatir Takrar, the acting CEO of Johnson Matthey, states that the company has established cooperation with more than 40 domestic companies, mainly for construction services and supply of raw materials, equipment and other goods. Important for the transfer knowledge and skills is that Johnson Matthey regularly organizes trainings for the employees, mostly for basic quality standards, health and safety, as well as environmental issues. Education and training is not provided to local suppliers, although this company offers guidance on meeting the international standards of

quality. Still, Jovanovikj (2016) concludes that backward linkages in North Macedonia are on relatively low level. As main reasons for that he emphasizes insufficient capacities of local companies with respect to EU requirements, as well as the current legal framework, which does not stimulate spillover effects in terms of drawing and disseminating new or missing skills.

Although focused more on the direct effects of the FDI, Janchevska (2014) provides similar findings. Her empirical analysis shows that the growth of the North Macedonian economy is highly driven by the FDI inflows. In order to further enhance the benefits for the long term economic development of the country, she suggests improvement of the country's infrastructure, as well as encouraging links between foreign and domestic companies.

Petkovski and Damoska Sekulovska (2018) investigate the impact of the FDI inflows in the automotive sector to the job properties in the manufacturing sector. The main pillars of their analysis are the job skills and wage distribution in the manufacturing sector in North Macedonia. They find distinct increase of the medium and high skilled labour force in the structure, which leads to conclusion that unlike in most CEE countries, job polarization in North Macedonia has not occurred.

In an earlier study, Apostolov (2016) focuses on the core links between foreign direct investments and innovation in Southeast Europe, with special reference to North Macedonia. Anticipating the idea that FDI is an essential pillar for moving the society towards developed market economy, he examines the possibility that increase of the stock of capital would inevitably lead to increased innovation. His primary concern is the model of 'industry – government – university relationships', which is considered as basic analytical framework that explains the 'innovation system' of an economy. Based on a firm-level survey data from the World Bank Microdata Library, the emphasis is on the differences between domestic and foreign companies, in relation to the FDI inflows. In general, findings suggest that positive tendencies in the sectors of innovation and technology cannot be neglected.

The above presented empirical results allowed assuming the following research hypotheses.

- H1 FDI in North Macedonia increase the level of competitiveness of their local associates (suppliers, contractors, etc.).
- H2 FDI in North Macedonia increase the productivity of their local associates (suppliers, contractors, etc.), through expansion

*of the production capacities and/or development of new products and services.*

- H3 *FDIS in North Macedonia increase the level of technological development of their local associates (suppliers, contractors, etc.), through investments in new and modern equipment.*
- H4 *FDIS in North Macedonia increase the quality of the workforce of their local associates (suppliers, contractors, etc.), through investments in trainings and education.*
- H5 *FDIS in North Macedonia increase the creativity and innovation of their local associates (suppliers, contractors, etc.).*
- H6 *FDIS in North Macedonia stimulate their local associates (suppliers, contractors, etc.) to search for new methods of production and organizational practices, as well as to create better conditions for their employees.*
- H7 *FDIS in North Macedonia increase the awareness of their local associates (suppliers, contractors, etc.) about the importance of management and marketing for their business success and development.*
- H8 *FDIS in North Macedonia encourage their local associates (suppliers, contractors, etc.) to build trust and stable (long-term) connections with their business partners, suppliers, customers (clients), etc.*

### Research Methodology

For the purposes of this paper, a specially designed survey was conducted in order to get answers of the previously elaborated questions and hypotheses. With respect to the data used, it is worth to emphasize the similarity to the approach of Jordaan (2017). Namely, the author uses data obtained from two surveys, one for the producer companies, and one for the local suppliers, intended to provide detailed information for the extent and intensity of the linkages between these two groups of companies. The former survey covers both, foreign and domestic producer companies, whereas the latter is conducted upon a random sample of local suppliers. Our survey covered totally 28 domestic companies, half of which work with the foreign companies operating in the free economic zones in North Macedonia, whereas the other half do not. The questionnaire was sent to randomly selected companies, taking care of the balance of the sample size.<sup>1</sup> This survey accounts for the business field of the companies (field), then the time of their active participation on the market (age), number of employees (size), and their orientation (B2B,

or B2C). Regarding the companies' field of activity, the survey makes a distinction between production, trade and services, but also allows for mixture of more than one area. As for the age of the companies, the time interval is 5 years, categorizing companies from up to 5 years old, 5 to 10, 11 to 20, and over 20 years old, whereas for the size, the survey recognizes companies with less than 20 employees, 21 to 50, 51 to 100, and more than 100 employees. As can be noticed, the standard classification in this regards (up to 50 employees for small companies, 50 to 150 for medium, and over 150 employees for large companies) is not used. In relation to the companies' orientation, the survey groups companies working solely with firms (B2B), consumers (B2C), and both, firms and customers.

The survey was conducted electronically, using Google forms web service. Regarding the structure of the sample, one can easily notice from the illustrations presented below that the sub-samples are quite homogenous. Namely, with respect to the working field of the companies, number of employees, years of active operation on the market and biggest clients, the sample of domestic companies that cooperates with FDI in North Macedonia has similar structure with the sample of domestic companies that do not cooperates with FDI.<sup>2</sup> This homogeneity provides solid ground for relevant and unbiased statistical analysis, since the differences that might affect the results are isolated. In other words, the properties of the companies cannot significantly affect the differences in the responses.

The survey provides variety of several different industry areas to group the companies, with 29 percent in construction and reconstruction of production facilities, 14 percent in maintenance of the equipment, 21 percent in raw materials supply, 7 percent in security, transport and logistics, and the remaining 29 percent in other industries.

The first part of the questionnaire collects data for the structure of the sample (as elaborated previously), in order to group the obtained results by different properties of the included companies. Such distinction is necessary for comparative statistical analysis. The second part quantifies the spillover effects that have actually occurred. The surveyed entities provide answers about their actions undertaken for business development in the past 5 years. The idea is that companies which cooperate with FDI would have significantly higher investments in this respect than companies which have not established any relationships with foreign companies operating in the free economic zones in North Macedonia, thus expressing the positive spillover effects.

TABLE 1 Structure of the Sample

Category	Item	Yes	No
Company's Activity	Production	3	7
	Trade	4	1
	Services	2	2
	All	5	4
Active on the market	Up to 5 years	2	5
	5-10 years	5	1
	11-20 years	2	5
	Over 20 years	5	3
Number of employees	Up to 20 employees	6	3
	21-50 employees	4	5
	51-100 employees	3	5
	Over 100 employees	1	1
Biggest clients	Firms	3	5
	Consumers	0	1
	Firms and consumers	11	8

The last two parts focus on the perception of the owners/managers of the local companies of the potential spillover effects of the cooperation with FDI, as well as the perception of the real impact of those spillovers. Therefore, in the third part local companies are asked to rank the determinants of their business' success, in order to see if there are any statistically significant differences in the mind-set between the two groups. Additionally, in the fourth part companies evaluate their current position in the market, by several points, such as level of competitiveness, business relationships, quality of the capital and the workforce, etc. Answers provided here allow us to compare whether there are any differences in the perceptions between the two groups of local companies about their stance, or not. Positive spillovers would mean that companies which cooperate with FDI would have higher self-awareness about their qualities and higher self-esteem.

With respect to the hypotheses established above, each question from q7 to q33 of the questionnaire (total of 27 questions) is linked to one of these hypotheses, allowing thus application of statistical methods for their testing. Given that more than one question is linked to each hypothesis, it is important to underline that they are representing different aspects. For example, one question represents the actual situation, whereas another is a reflection of the perceptions of the local companies for the same situation. The sta-

tistical analysis is based on the equality tests regarding the sample mean<sup>3</sup> and median<sup>4</sup> of the two sub-sets of data (domestic companies that cooperate with FDI operating in the free economic zones in North Macedonia and domestic companies that do not cooperate with these FDI). These equality tests should provide answers to the hypotheses, by testing the statistical significance of the differences in the responses between the two data sub-sets.

The null hypothesis for all statistical tests used in the analysis (parametric and non-parametric) is that there are no differences between the provided answers, or there are no statistically significant differences between the means or the medians of the two data sub-sets. Thus, rejection of the null hypothesis would mean that cooperation with the FDI in North Macedonia can be significant reason for certain differences between the domestic companies, with respect to their competitiveness and production. Why do we employ several different equality tests? The reason is simple, to provide more evidence for rejection of the null hypothesis, having in mind the assumptions and limitations of each of the tests used in the analysis. For example, parametric tests are known for the assumption of normal distribution of the data, or the bell-shaped distribution of the data around the mean. If this assumption is violated the results can be misleading. On the other hand, non-parametric tests are known as distribution-free tests, since they do not rely on the assumption of normal distribution of the data. Therefore, they are more suitable when this assumption is violated.

As two very important measures of central tendency, the mean and the median in normally distributed data are very close to each other, whereas if the data is not normally distributed the measurements can be significantly different. Thus, parametric test in fact test for differences in the sample means, whereas non-parametric tests are focused on the sample medians (Garth 2008). For simplicity reasons, in order not to widen the topic of this paper, further and deeper elaboration on the statistical techniques used in the analysis will not be provided.

Given the above, one cannot neglect the unique methodological approach of this paper. By using firm-level survey data, this research is not only taking into account the spillover effects from the foreign companies operating in the free economic zones in North Macedonia, but also accounts for the perceptions of the domestic entrepreneurs and managers of local companies. Opposite to this methodological approach, contemporary empirical literature in this area is mostly based on regression analysis, primarily using econo-

metric techniques for panel data modelling (Doytch and Epperson 2012; Elkomy, Ingham, and Read 2016).

### Empirical Findings

Table 2 presents the results for the questions of the second part (yes or no questions). It provides overview of the differences between local companies cooperating with foreign companies (MNEs) operating in the free economic zones in North Macedonia and the ones that do not cooperate, with respect to their development in the past 5 years, or more precisely, their investment decisions. Namely, local companies here provide answers regarding their recent investments for expansion of the production facilities, improvement and modernizing of the equipment, increasing the quality of the workforce, development of new products, services and organizational practices. The descriptive table has three sections, or provides descriptive statistics for the overall data set (28 companies), as well as separately for the two sub-samples, or the two groups of companies, by question.

As can be seen, responses provided by the companies that cooperate with FDI (part Yes = 1) and companies that do not (part No = 2) are not significantly different. This means that both groups of companies demonstrate similar behaviour. For instance, all 28 interviewed companies regularly follow the world trends and modern practices in their area of work. Most of the companies (both groups) pay attention to the quality of the workforce, by organizing different kinds of trainings for their employees and investing in improvement of their skills and abilities. Also, equal number of local companies that do and do not cooperate with the FDI, 11 (of each group), regularly invest in modernizing of the equipment, against 3 companies (also of each group) which answered with no on this question. On the other hand, this proportion is lower (more balanced) when it comes to capital investments for building new production facilities and purchasing new equipment, for both groups of companies.

Besides the measures of central tendency and dispersion, table 2 also contains indicators regarding the distribution of the obtained responses (Jarque-Bera statistics and its  $p$ -value, or probability). This indicator shows that on a significance level of 0.1 (90% confidence), there are some normally distributed data series, and some not normally distributed. Probability less than 0.1 (marked red) means non-normally distributed data. Sample results are not normally distributed for all questions. On disaggregated level (by group of companies), for the companies that do cooperate with the FDI in the free economic zones in North Macedonia the results for ques-

TABLE 2 Descriptive Statistics, Q7-Q14

	Item	q7	q8	q9	q10	q11	q12	q13	q14
Total	Mean	1.39	1.50	1.21	1.11	1.07	1.18	1.14	1.00
	Median	1	1.5	1	1	1	1	1	1
	Std. Dev.	0.50	0.51	0.42	0.31	0.26	0.39	0.36	0.00
	Jarque-Bera	4.71	4.67	9.05	53.25	147.81	13.93	24.92	-
	Probability	0.0949	0.0970	0.0108	0.0000	0.0000	0.0009	0.0000	-
Yes = 1	Mean	1.43	1.57	1.21	1.14	1.00	1.14	1.21	1.00
	Median	1	2	1	1	1	1	1	1
	Std. Dev.	0.51	0.51	0.43	0.36	0.00	0.36	0.43	0.00
	Jarque-Bera	2.34	2.34	4.53	12.46	-	12.46	4.53	-
	Probability	0.3108	0.3108	0.1040	0.0020	-	0.0020	0.1040	-
No = 2	Mean	1.36	1.43	1.21	1.07	1.14	1.21	1.07	1.00
	Median	1	1	1	1	1	1	1	1
	Std. Dev.	0.50	0.51	0.43	0.27	0.36	0.43	0.27	0.00
	Jarque-Bera	2.41	2.34	4.53	73.91	12.46	4.53	73.91	-
	Probability	0.3001	0.3108	0.1040	0.0000	0.0020	0.1040	0.0000	-

NOTES Q7: Have you invested in expanding your production facilities over the past 5 years? Q8: Have you invested in the procurement of new equipment over the past 5 years? Q9: Are you regularly modernizing the work equipment? Q10: Have you invested in the development of new products/services or an increase in the assortment in the past 5 years? Q11: Have you invested in the past 5 years in improving the skills and abilities of your employees? Q12: Does your company regularly organize trainings for employees and managers? Q13: Have you changed/adjusted the way of organizing your work in the last 5 years in order to increase your competitiveness on the market? Q14: Do you regularly follow the world trends, modern practices and achievements in your area of work?

tions q7, q8, q9 and q13 are normally distributed, whereas for the companies that do not cooperate with the FDIIs the results for questions q7, q8, q9 and q12 are normally distributed. This is especially important when it comes to selection of appropriate method for statistical analysis (parametric or non-parametric equality tests). As for the questions from q15 to q33, same statistical description is presented in tables 3, 4 and 5. Here, with respect to the sample mean, most significant differences in the provided answers have questions q17, q18, q21 to q26 and q29, whereas most similar responses have questions q15, q19 and q30. With respect to the sample median, companies of the two groups have provided slightly different answers for questions q19, q21 to q26 and q29, whereas no differences between the sample medians have questions p28, p32 and p33.<sup>5</sup>

As shown by the mean values of the results which emphasizes the differences between the two groups, companies that do not cooper-



TABLE 3 Descriptive Statistics of the Scaled Questions: Total

Question	Mean	Median	Std. Dev.	Jarque-Bera	Probability
q15	3.75	4	1.08	1.96	0.3759
q16	4.39	4	0.63	1.64	0.4410
q17	4.04	4	0.84	2.72	0.2569
q18	4.00	4	1.12	3.02	0.2214
q19	4.29	5	0.98	5.48	0.0646
q20	4.25	4	0.75	2.21	0.3318
q21	4.11	5	1.20	6.00	0.0499
q22	4.14	5	1.21	6.47	0.0394
q23	4.21	5	1.07	6.53	0.0382
q24	4.21	5	1.03	5.23	0.0730
q25	4.36	5	0.87	5.66	0.0589
q26	4.14	5	1.21	6.47	0.0394
q27	4.32	5	0.90	4.56	0.1022
q28	4.04	4	0.79	2.14	0.3438
q29	4.25	4	0.70	1.54	0.4626
q30	4.39	5	0.79	3.90	0.1421
q31	4.43	5	0.74	3.92	0.1407
q32	4.32	5	0.90	4.56	0.1022
q33	4.75	5	0.52	27.12	0.0000

ate with MNEs operating in the free economic zones in North Macedonia have higher score only for the questions q11, q16, q19 and q20, meaning that these companies value more the significance of the long-term relationship with their business partners and regular customers for survival and development of their companies, as well as recognize better the role of the management. Additionally, according to the provided answers, these companies have made higher investments in the past 5 years for improvement of the skills and abilities of their employees, compared to the companies cooperating with the FDIS.

Both groups of companies on average have provided similar answers to the questions, q7, q9, q10, q12, q14, q15 and q30, whereas for the rest 16 questions, the differences in the responses go in favour of the companies cooperating with the FDIS.

Given that descriptive provide only general indications, a deeper statistical analysis is required to derive conclusions. Summary of the results of the equality tests is provided in table 6. It contains the test statistic and its corresponding *p*-value (probability), which shows the lowest significance level for rejection of the null hypothesis.<sup>6</sup> In

TABLE 4 Descriptive Statistics of the Scaled Questions: Yes = 1

Question	Mean	Median	Std. Dev.	Jarque-Bera	Probability
q15	3.71	3.5	1.14	1.17	0.5566
q16	4.29	4	0.73	0.96	0.6187
q17	4.29	4.5	0.83	1.57	0.4557
q18	4.71	4	0.92	1.74	0.4188
q19	4.21	4	0.80	1.24	0.5384
q20	4.14	4	0.77	0.91	0.6330
q21	4.57	5	0.65	3.17	0.2050
q22	4.64	5	0.63	5.96	0.0508
q23	4.50	5	0.85	1.45	0.0007
q24	4.57	5	0.65	3.17	0.2050
q25	4.64	5	0.63	5.96	0.0508
q26	4.64	5	0.63	5.96	0.0508
q27	4.50	5	0.76	2.84	0.2420
q28	4.21	4	0.80	1.24	0.5384
q29	4.50	5	0.65	1.81	0.4039
q30	4.43	5	0.85	2.48	0.2899
q31	4.57	5	0.65	3.17	0.2050
q32	4.43	5	0.76	1.96	0.3751
q33	4.86	5	0.36	1.25	0.0020

TABLE 5 Descriptive Statistics of the Scaled Questions: No = 2

Question	Mean	Median	Std. Dev.	Jarque-Bera	Probability
q15	3.79	4	1.05	0.88	0.6452
q16	4.5	4.5	0.52	2.33	0.3114
q17	3.79	4	0.80	0.24	0.5384
q18	3.93	4.5	1.33	1.92	0.3824
q19	4.36	5	1.15	4.37	0.1124
q20	4.36	4.5	0.74	1.39	0.4991
q21	3.64	4	1.45	1.42	0.4905
q22	3.64	4	1.45	1.42	0.4905
q23	3.93	4	1.21	1.71	0.4261
q24	3.86	4	1.23	1.56	0.4581
q25	4.07	4	1.00	1.24	0.5367
q26	3.64	4	1.45	1.42	0.4905
q27	4.14	4.5	1.03	1.59	0.4516
q28	3.86	4	0.77	0.91	0.6330
q29	4.00	4	0.68	0.26	0.8784
q30	4.36	4.5	0.74	1.39	0.4991

*Continued on the next page*

*Continued on the next page*

q31	4.29	4.5	0.83	1.57	0.4557
q32	4.21	5	1.05	1.99	0.3701
q33	4.64	5	0.63	5.96	0.0508

NOTES q15: The role of marketing is crucial for the survival and development of our business; q16: The development and maintenance of stable and long-term relationships with our associates and suppliers is crucial for the survival and development of our business; q17: The quality of our products/services depends on the quality and motivation of our employees; q18: The survival and progress of our business depends on the satisfaction of the employees in relation to the amount of their salary, working conditions, the opportunity for advancement and improvement, the working atmosphere, etc.; q19: Regular consumers are of particular importance for the survival of our business; q20: The responsibility for the success of our company's operations lies entirely with the management; q21: Cooperation with a foreign company operating in North Macedonia contributes (will contribute) to the increase of the competitiveness of our company; q22: The cooperation with a foreign company operating in North Macedonia contributes (would contribute) to the increase of the productivity of our company; q23: Cooperation with a foreign company operating in North Macedonia contributes (will contribute) to the increase the innovation of our company; q24: The cooperation with a foreign company operating in North Macedonia contributes (will contribute) to the improvement of the working processes of our company; q25: The cooperation with a foreign company operating in North Macedonia contributes (would contribute) to the promotion of the cooperation with our business partners; q26: The cooperation with a foreign company operating in North Macedonia contributes (would contribute) to the improvement of the working conditions of our employees; q27: The cooperation with a foreign company operating in North Macedonia leads (will lead) to transfer of technology and knowledge; q28: The degree of competitiveness of your company on the market; q29: The success of your company's management; q30: The quality of the equipment at your disposal; q31: The quality and capability of your employees; q32: The innovation of your company; q33: Collaboration with your business partners, suppliers and consumers.

total, four statistical tests are applied: *t*-test, ANOVA, Chi-square and Kruskal-Wallis.

Within the groups of tests, one can see that both parametric tests (*t*-test and ANOVA) provide the same results. On the other hand, the Kruskal-Wallis test is slightly stricter than the Chi-square test, in terms of rejection of the null hypothesis.

In this regards, table 6 shows that most of the differences are not statistically significant at the 0.1 significance level, therefore, not providing sufficient evidence for rejection of the null hypothesis. However, the null hypothesis can be rejected when it comes to questions q21, q22, q24, q25, q26 and q29, for the differences in the sample mean, and questions q22, q26 and q29 for differences in the sample median.

In the context of the distribution of the data, since the data se-

TABLE 6 Statistical Tests: Results

Question	Mean equality tests				Median equality tests			
	<i>t</i> -test		Anova <i>F</i> -test		Med. $\chi^2$		Kruskal-Wallis	
	Value	Prob.	Value	Prob.	Value	Prob.	Value	Prob.
q7	0.37	0.7115	0.14	0.7115	0.15	0.6988	0.10	0.7477
q8	0.74	0.4683	0.54	0.4683	0.57	0.4497	0.41	0.5201
q9	0.00	1.0000	0.00	1.0000	0.00	1.0000	0.00	1.0000
q10	0.59	0.5585	0.35	0.5585	0.37	0.5412	0.10	0.7477
q11	-1.47	0.1530	2.17	0.1530	2.15	0.1422	0.41	0.5201
q12	-0.48	0.6369	0.23	0.6369	0.24	0.6217	0.10	0.7477
q13	1.06	0.2975	1.13	0.2975	1.17	0.2801	0.41	0.5201
q14	0.00	1.0000	0.00	1.0000	0.00	1.0000	0.00	1.0000
q15	-0.17	0.8644	0.03	0.8644	0.16	0.6857	0.03	0.8722
q16	-0.90	0.3773	0.81	0.3773	0.14	0.7047	0.41	0.5201
q17	1.63	0.1161	2.64	0.1161	2.49	0.1147	2.23	0.1354
q18	0.33	0.7431	0.11	0.7431	0.14	0.7047	0.00	0.9817
q19	-0.38	0.7062	0.15	0.7062	0.00	1.0000	0.76	0.3827
q20	-0.75	0.4611	0.56	0.4611	0.58	0.4450	0.51	0.4763
q21	2.19	0.0375	4.81	0.0375	0.00	1.0000	2.44	0.1182
q22	2.37	0.0255	5.61	0.0255	0.00	1.0000	3.05	0.0808
q23	1.45	0.1602	2.09	0.1602	0.00	1.0000	1.48	0.2234
q24	1.92	0.0657	3.69	0.0657	0.00	1.0000	2.03	0.1543
q25	1.81	0.0819	3.28	0.0819	0.00	1.0000	2.23	0.1354
q26	2.37	0.0255	5.61	0.0255	0.00	1.0000	3.05	0.0808
q27	1.05	0.3052	1.09	0.3052	0.00	1.0000	0.68	0.4082
q28	1.20	0.2403	1.44	0.2403	1.47	0.2248	1.27	0.2603
q29	1.99	0.0573	3.96	0.0573	3.74	0.0530	3.13	0.0769
q30	0.24	0.8151	0.06	0.8151	0.00	1.0000	0.15	0.6961
q31	1.02	0.3172	1.04	0.3172	0.00	1.0000	0.68	0.4082
q32	0.62	0.5411	0.38	0.5411	0.00	1.0000	0.10	0.7477
q33	1.10	0.2822	1.21	0.2822	0.00	1.0000	0.48	0.4907

ries for questions q21, q22, q24, q25 and q26 are not normally distributed, parametric tests are not valid, which is further emphasized by the small sample size. In this case results from non-parametric tests should be considered as relevant. As for question q29, since the data are normally distributed, parametric tests provide reliable results, even though all four tests here reject the null hypothesis at a 0.1 significance level.

Following the statistical analysis, hypotheses 1, 3, 4, 5 and 8 are rejected, whereas hypotheses 2, 6 and 7 are partly rejected. The null

hypothesis is also rejected.<sup>7</sup> A partly rejected hypothesis means that, out of the several related questions, only some (one) are rejected, not all. For example, the second hypothesis, related to the productivity spillovers, out of 3 relevant questions attached to this hypothesis (q7, q10 and q22), there are statistically proven differences in the responses only for question q22. The results of this question, statistically significant differences, go in favour of the established hypothesis, whereas the results for the other two questions reject it. Hence, hypothesis 2 is partly rejected. It is same with hypotheses 6 and 7.

Referring to questions q22, q26 and q29, for which there are statistically significant differences in the provided responses, it means that companies cooperating with some of the MNEs operating in the free economic zones in North Macedonia on average have higher beliefs that cooperation with foreign companies would lead to productivity increase of the local company (question q22) and improvement of the working conditions for the employees (question 26). Also, these groups of companies on average evaluate more the success of their management (question q29). As for the other questions, both groups of companies included in the survey provided similar answers, or answers that do not differ significantly.

## Conclusions

The aim of the paper was to examine theoretically and empirically the spillover effects of FDIs (multi-national enterprises) in the Republic of North Macedonia operating in the free economic zones. In particular, given the nature of the MNE's in North Macedonia, as well as their market orientation, the analysis focuses on the backward vertical spillover effects. In other words, those are the linkages between the foreign companies and their local suppliers, partners, associates, etc. Besides benefits provided by the North Macedonian Government, other main factors influencing the decision to move, or expand, their production in North Macedonia are: cheaper labour force, favourable geographical location, connection and proximity to European markets, favourable business environment, low administrative barriers, good transport and communal infrastructure, etc.

Spillover effects, in terms of productivity and competitiveness increase, are observed through three main channels: transfer of technology; transfer of knowledge; and creativity and innovation. The results suggest that in general North Macedonian companies do believe that cooperation with FDIs would lead to higher transfer of knowledge and technology, although there is not enough empirical evidence supporting this claim. There is also no empirical support

for the assumption that cooperation with FDI has significant influence on the investment decisions of the local companies, as well as that FDI in North Macedonia stimulate the search of new and innovative methods of production and organizational practices. Local companies that cooperate with FDI recognize the contribution of their management for the success of the company and the importance of the working satisfaction of their employees, but they do not provide any additional training for professional improvement. FDI in North Macedonia encourage building of trust and stable connections of the local companies with their suppliers and customers, but do not increase the awareness of the local companies about the importance of the marketing for their business development.

However, one should also have in mind that the limitations and assumptions that burden this research. Possible limitations in this regard can be viewed from two different aspects, technical and substantial. From technical point of view, limitations can be linked to the sample selection process, the size of the sample and the justification of the applied statistical methods. Namely, relatively small sample size (only 28 companies included in the survey), selected in methodologically questionable manner, can result in biased and misleading results. Furthermore, equality tests used to analyze the results obtained from the survey do not provide important information, such as causal relationship, dynamics, extent and intensity of the spillover effects. Practically, the whole analysis is intended only to determine if there are spillover effects, in terms of increased productivity and competitiveness, from the foreign companies in the free economic zones in North Macedonia, to their local partners/associates/suppliers. In other words, the intention is to provide evidence of the existence of backward vertical spillover effects in North Macedonia, aimed to test the justification of the government's determination to attract foreign investments. Having in mind the purpose of the research, the assumptions that the aforementioned limitations do not significantly affect the obtained results and provided conclusions are justified.

An additional argument that can be treated as limitation is that this study, and consequently its findings, is based on perceptions, and not on robust statistical data, which brings out the conceptual weaknesses related to perceptions in first place. However, given that such approach widens the perspectives in the analysis of the spillover effects of FDI, and provides opportunity for further research and discussion, this limitation might be the most important added value of this paper.

## Notes

- 1 Given the limitations that might arise when using uneven samples in the statistical analysis, this research is based on even number of companies cooperating and not cooperating with foreign companies operating in North Macedonia
- 2 In the following illustrations, as well as further in the tables, companies that cooperate with FDI in North Macedonia are given value 1 (yes), whereas companies that do not have value 2 (no).
- 3 *t*-test and ANOVA (parametric tests).
- 4 Chi-square test and Kruskal-Wallis test (non-parametric tests).
- 5 Differences between the central tendency indicators (mean and median) between the two groups of companies.
- 6 Null hypothesis of all tests applied is that there are no statistically significant differences in the provided answers.
- 7 This is only of informative nature and not taken into account when deriving the conclusion.

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# Abstracts in Slovene

## Bibliometrična ocena študij na temo odnosa podjetnikov do tveganja

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in Adina Liliana Prioteasa*

Področje, ki se posveča vplivom odnosa do tveganja na odločitve, ki jih podjetniki sprejemajo v podjetjih, je vse od leta 1990 deležno precejšnje raziskovalne pozornosti, kar se odraža tudi v vse številnejših objavah, posvečenih analizi in razvoju metodologije upravljanja tveganj. Zaključki študije, katere cilj je bil analizirati publikacije v obdobju med 1991 in 2019, temeljijo na rezultatih interpretacije publikacij v povezavi s ključnimi vidiki odnosa med podjetnikom in tveganjem. Poizvedba po ključnih besedah »podjetništvo« ter »odnos do tveganj« v bazi podatkov Web of Science v letu 2020 je podala seznam 300 prispevkov, ki so bili nadalje obravnavani v okviru bibliometrične analize. S programsko opremo vosviewer je bila opravljena tudi analiza ključnih besed, vključno s pojavnostjo, sočasnostjo (močjo povezave), medsebojnimi referencami ter kartografskim prikazom ključnih besed. V analizi se je ocenjevalo več vrst podatkov: število objavljenih prispevkov, podatki o avtorjih in njihovi narodnosti, število citatov izbranih prispevkov. V sklopu raziskave se je ocenilo korelacije, ki so jih strokovnjaki vzpostavili med posameznimi posebnostmi domene, pri čemer je bila ciljna tema odnosa do tveganja v podjetništvu. Rezultati raziskave kažejo, da je največje število študij in citatov nastalo v obdobju med 2016 in 2019. V letih 2013–2014 so avtorji analizirali predvsem vpliv trga, finančna tveganja, prizadevanja podjetnikov, vpliv onesnaževanja ter dodeljena sredstva. V zadnjih letih se je glavni poudarek študij prenesel na vpliv podjetniškega izobraževanja, inovacij, kulture, gospodarskega razvoja odnosa do tveganj, pa tudi na ovire, s katerimi se podjetniki srečujejo pri doseganju svojih ciljev. Med omejitvami študije lahko izpostavimo dejstvo, da je bila analiza izvedena na podlagi informacij, pridobljenih iz ene same baze podatkov (Web of Science), in z uporabo fitrirane poizvedbe, ki je vključevala samo članke, pregledne članke in prispevke na konferencah. V teoretičnem smislu gre za pomembno študijo, saj ponuja popis velikega števila publikacij na izbrano temo ter združene podatke, pridobljene s pomočjo bibliometrične raziskave. Pridobljeni rezultati lahko služijo raziskovalcem in akademikom, ki jih zanima proučevanje vpliva odnosa do tveganja v podjetništvu. Študija ponuja prikaz trenutnega stanja pisnih publikacij na to temo ter izpostavlja možnosti za nadaljnje raziskave, začenši s kvantitativno analizo znanstvene literature področja, pri čemer opredeli najprimernejše revije za objavo rezultatov tovrstnih študij. Članek predstavlja enega redkih prispevkov, ki na podlagi kompleksne bibliometrične analize raziščejo dejansko stanje opravljenih študij na temo korelacije med odnosom do tveganja in podjetništva.

*Ključne besede:* tveganje, odnos do tveganja, bibliometrična analiza, podjetništvo, podjetnik  
*Management* 15 (1): 3–27

### **Razumevanje osebnih lastnosti potrošnikov kot izhodišče ciljnega trženja**

*Tina Vukasović*

Segmentacija trga in izbira ciljnih trgov omogočata podjetjem razločitve in pozicioniranje svoje ponudbe na trgu ter načrtovanje tržne dejavnosti na način, da se lahko čim bolj približajo potrošnikom. Podjetje, ki posluje na velikem trgu, kmalu ugotovi, da ne more oskrbeti vseh potrošnikov tega trga. Morda gre za preveliko število potrošnikov ali pa obstajajo precejšnja razhajanja med njihovimi potrebami, morda so razpršeni po trgu ali pa se njihove nakupne zahteve bistveno razlikujejo. Osrednji cilj tržne raziskave, katere poglobilni rezultati so predstavljeni v pričujočem članku, je bil raziskati življenjski slog, osebne vrednote ter medijske navade potrošnikov na podlagi kvantitativne raziskovalne metode in tehnike spletnega anketiranja. Rezultati raziskave predstavljajo osnovo za segmentacijo trga ter ustvarjanje učinkovitih tržnih sporočil ter izbiro ustreznih orodij tržnega komuniciranja na analiziranem trgu.

*Ključne besede:* življenjski slog, vrednote, potrošnik, segmentacija trga, tržna strategija, mediji, tržno komuniciranje, Hrvaška  
*Management* 15 (1): 29–41

### **Usposabljanje in izobraževanje zaposlenih**

*Katjuša Kostanjšek in Gregor Jagodič*

V preteklosti je bilo za delodajalce poglobitnega pomena, da so bili zaposleni ubogljivi in so upoštevali navodila, danes pa se pričakuje, da organizaciji prinesejo dodano vrednost v smislu znanja, izkušenj, spretnosti in inovativnosti pri delu. Te prednosti se lahko pridobijo skozi usposabljanje in vseživljenjsko izobraževanje zaposlenih. Namen raziskave je bil preveriti, kako organizacije razumejo usposabljanje in izobraževanje zaposlenih. Pri tem nas je še posebej zanimal prenos veščin novo zaposlenim v času poskusne dobe. Študija je potrdila hipotezo, da se večina organizacij odloča za izvedbo usposabljanj v poskusnem obdobju zaposlenega.

*Ključne besede:* Usposabljanje zaposlenih, izobraževanje, prenos veščin, organizacija, upravljanje kadrov  
*Management* 15 (1): 43–56

## Razumevanje učinkov prelivanja neposrednih tujih naložb: dokazi iz Severne Makedonije

*Snezhana Hristova in Dusica Stevcevska-Srbinoska*

Ta prispevek teoretično in empirično preučuje učinke prelivanja neposrednih tujih naložb v Severni Makedoniji. Raziskava se osredotoča na posledice B2B-odnosov med lokalnimi podjetji in multinacionalnimi podjetji, ki delujejo v prostih ekonomskih conah (TIDZ) v Severni Makedoniji. Izvedena je bila posebej zasnovana raziskava med 28 domačimi podjetji, od katerih polovica sodeluje s tujimi podjetji, ki delujejo v prostih ekonomskih conah v Severni Makedoniji. Statistična analiza temelji na preskusih enakosti glede na povprečno vrednost (t-test in ANOVA) in mediano (Hi-kvadrat in Kruskal-Wallisov test) zgoraj omenjenih dveh podskupin podatkov. Ugotovitve raziskave kažejo, da na splošno neposredne tuje naložbe spodbujajo stabilne povezave med lokalnimi podjetji, dobavitelji in kupci, vendar ne povečujejo zavesti lokalnih podjetij o pomenu trženja za njihov poslovni razvoj. Prav tako ni zadostne empirične podpore domnevi, da ima sodelovanje z neposrednimi tujimi naložbami pomemben vpliv na naložbene odločitve lokalnih podjetij ali da neposredne tuje naložbe spodbujajo iskanje inovativnih proizvodnih metod in organizacijskih praks. Poleg neposrednih ekonomskih koristi prisotnosti tujih podjetij v državi gostiteljici, kot so kopičenje kapitala, povečanje stopnje zaposlenosti, višje plače in boljši delovni pogoji, se pričakuje, da se bodo pojavili tudi posredni učinki, zaželeno v obliki prelivanja produktivnosti, ki bo še okrepila gospodarsko rast in razvoj ter spodbujala poslovno okolje in konkurenčnost. Glede na praktičnih posledice lahko te ugotovitve oblikovalcem politike in vodjem podjetij pomagajo prepoznati različne učinke prelivanja neposrednih tujih naložb v proizvodnjo domačih podjetij. Poleg tega morajo oblikovalci politik spodbujati sposobnost lokalnih kupcev za vključitev naprednih izdelkov in storitev, kupljenih pri tujih podjetjih. Istočasno pričujoča študija prispeva k obstoječi raziskovalni bazi na tem področju in predstavlja enega od pionirskih poskusov v primeru RNM. Rezultati raziskave so zelo pomembni za podjetja sama, lahko pa so tudi izhodišče za prihodnje raziskave v smeri odprave vladnih in drugih korporativnih vprašanj, povezanih z odnosom med domačimi in tujimi podjetji.

*Ključne besede:* neposredne tuje naložbe, učinki prelivanja, poslovno okolje in konkurenčnost

*Management* 15 (1): 57–79