

**ŞCOALA DOCTORALĂ INTERDISCIPLINARĂ**

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**DIGITAL MARKETING – A SOLUTION FOR THE  
ENTREPRENEURIAL ECOSYSTEM DEVELOPMENT IN  
ROMANIA**

**MARKETINGUL DIGITAL – O SOLUŢIE PENTRU  
DEZVOLTAREA ECOSISTEMULUI ANTREPRENORIAL  
DIN ROMÂNIA**

**ABSTRACT/ REZUMAT**

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## TABLE OF CONTENTS

ACKNOWLEDGMENT .....	3
THE TABLE OF CONTENTS IN THESIS .....	4
NOTATION LIST .....	8
LIST OF ABBREVIATIONS .....	10
INTRODUCTION .....	11
THE STRUCTURE OF THE THESIS.....	18
LIST OF PUBLICATIONS.....	28
BIBLIOGRAPHY .....	30

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## THE TABLE OF CONTENTS IN THESIS

<b>NOTATION LIST .....</b>	<b>11</b>
<b>ABBREVIATIONS LIST.....</b>	<b>13</b>
<b>LIST OF TABLES.....</b>	<b>14</b>
<b>LIST OF FIGURES.....</b>	<b>19</b>
<b>ABSTRACT (RO) .....</b>	<b>21</b>
<b>ABSTRACT (EN) .....</b>	<b>23</b>
<b>INTRODUCTION.....</b>	<b>25</b>
<b>CHAPTER 1. THEORETICAL AND METHODOLOGICAL ASPECTS REGARDING DIGITAL MARKETING .....</b>	<b>30</b>
1.1. The evolution of marketing and the new digital age for micro-enterprises and SMEs.....	30
1.2. Concepts and methodologies applied in digital marketing .....	31
1.2.1. Digital age-adjusted marketing mix .....	31
1.2.2. Direct marketing in the virtual space .....	32
1.2.3. Sales funnel .....	35
1.2.4. User buying cycle.....	37
1.2.5. Search Engine Optimization (SEO) .....	40
1.2.6. Usability and user experience .....	46
1.2.7. Content creation and organic growth.....	48
1.2.8. Search Engine Marketing (SEM).....	49
1.2.9. Social Media Marketing (SMM).....	51
1.2.10. Integrated strategy .....	54
<b>CHAPTER 2. CURRENT STATE OF DIGITAL MARKETING KNOWLEDGE.....</b>	<b>56</b>
2.1. Systematic analysis of the literature on micro-enterprises, SMEs and digital marketing.....	56
2.1.1. Undigitalized business versus the digitized business acosystem. IDITAROD model .....	56
2.1.2. Digital transformation of micro-enterprises and SMEs through marketing.....	59
2.1.3. Modelling the digital maturity.....	61
2.1.3.1. Analytic Processes Maturity Model (APMM). .....	61
2.1.3.2. Boston Consulting Group Maturity Model .....	64
2.1.4. Attribution models in digital marketing.....	67
2.2. The current state of knowledge of the Romanian entrepreneurial ecosystem regarding digital marketing... 69	
2.2.1. The current context-digital marketing and the activity of micro-enterprises and SMEs.....	69
2.2.2. The last 5 years: the evolution of digital presence of micro-enterprises and SMEs and digital skills of entrepreneurs .....	73
<b>CHAPTER 3. CONNECTED CONSUMER BEHAVIOUR-INFLUENTIAL FACTOR IN THE ENTREPRENEURIAL ECOSYSTEM DEVELOPMENT .....</b>	<b>76</b>
3.1 The connected consumer behaviour .....	76
3.2. Shifting from e-commerce to m-commerce.....	76
3.3. Touchpoints optimisation and the consumer journey .....	77
3.3.1. Artificial intelligence in electronic commerce.....	78
3.3.2. Touchpoint of consumer journey.....	80
3.3.3. Website loading page speed on mobile devices .....	81
3.3.4. The impact of delivery policy on purchasing behaviour .....	81
3.3.5. The competitive buying behaviour model .....	82
<b>CHAPTER 4. ROMANIAN MICRO-ENTERPRISES AND SMES DIGITAL TRANSFORMATION AND THE CONSUMER JOURNEY OPTIMISATION. QUALITATIVE RESEARCH.....</b>	<b>84</b>



4.1. Qualitative marketing research-focus group "Developing the entrepreneurial ecosystem through digital marketing for SMEs" .....	84
4.1.1. Research objectives.....	84
4.1.2. Research hypothesis.....	85
4.1.3. Research methodology .....	85
4.1.4. Data analysis and interpretation .....	85
4.1.5. Limits of the study .....	91
4.1.6. Conclusions.....	91
4.2. Qualitative in-depth interview marketing research: "Opinions and attitudes of Romanian entrepreneurs towards digital transformation of micro-enterprises and SMEs through digital marketing" .....	93
4.2.1. Research context and impact of the study.....	93
4.2.2. Objectives.....	93
4.2.3. Research hypothesis.....	93
4.2.4. Methodology .....	93
4.2.5. Data analysis and interpretation .....	94
4.2.5.1. Entrepreneurs' opinions on the digital transformation through the online presence of the business.....	94
4.2.5.2. Entrepreneurs' attitudes towards the adoption of digital marketing tools .....	96
4.2.5.3. Entrepreneurs' perception of the consumer profile in the virtual space.....	97
4.2.5.4. Positioning Romanian entrepreneurs in relation to online advertising methods.....	98
4.2.5.5. Marketing activity undertaken by Romanian entrepreneurs in the context of the COVID-19 pandemic.....	99
4.2.6. Limits of in-depth-interview research method .....	100
4.2.7. Conclusions.....	100
4.3. Qualitative research based on secondary data regarding the consumer journey optimisation .....	101
4.3.1. Research objectives and hypothesis.....	101
4.3.2. Methodology .....	103
4.3.2.1. Research methods.....	103
4.3.2.2. Touchpoints' loading page speed.....	104
4.3.2.3. Analysis of touchpoints using CFS .....	106
4.3.2.4. Analysis of artificial intelligence usage quality within user-retailer communication process.....	109
4.3.2.5. Micro-enterprises and SMEs' digital maturity analysis.....	110
4.3.3. Results.....	113
4.3.3.1. Touchpoints' loading page speed results.....	113
4.3.3.2. The results of touchpoints using CFS analysis .....	118
4.3.3.3. Content analysis of artificial intelligence usage quality within user-retailer communication process results.....	122
4.3.3.4. The results micro-enterprises and SMEs' digital maturity analysis .....	123
4.3.4. Research limits.....	127
4.3.5. Study conclusions and scientific contribution .....	127
<b>CAPITOL 5. SURPRISING THE PERFORMANCE OF MICRO-ENTERPRISES AND SMES IN ROMANIA. QUANTITATIVE MARKETING RESEARCH .....</b>	<b>129</b>
Quantitative research aim.....	129
5.1. Quantitative marketing research: "Opinions, attitudes and behaviors of Romanian entrepreneurs towards the minimum presence of micro-enterprises and SMEs in the virtual space" .....	129
5.1.1. The purpose of the research and the research questions .....	129



5.1.2. Methodological considerations.....	130
5.1.3. Research objectives.....	130
5.1.4. Hypothesis.....	131
5.1.4.1. General hypothesis.....	131
5.1.4.2. Statistical hypothesis.....	132
5.1.5. Research population.....	133
5.1.6. Sample size.....	134
5.1.7. Sampling and data collection.....	135
5.1.8. Results.....	136
5.1.8.1. Primary data analysis.....	136
5.1.8.2. Hypothesis testing.....	143
5.2. Quantitative marketing research: "Opinions, attitudes and behaviors of entrepreneurs regarding the development of micro-enterprises and SMEs in Romania through digital marketing.".....	157
5.2.1. The purpose of the research and the research questions.....	157
5.2.2. Methodological considerations.....	157
5.2.3. Research objectives.....	158
5.2.4. Hypothesis.....	160
5.2.4.1. General hypothesis.....	160
5.2.4.2. Statistical hypothesis.....	160
5.2.5. Research population.....	162
5.2.6. Sample size.....	162
5.2.7. Sampling and data collection.....	163
5.2.8. Results.....	164
5.2.8.1. Univariate analysis.....	164
5.2.8.2. Bivariate analysis.....	189
5.2.8.3. Multivariate data analysis. Multiple regression.....	206
The limits of quantitative research.....	208
Quantitative research conclusions.....	208
<b>CHAPTER 6. THE CASHLESS SOCIETY, DIGITAL DIVIDE, AND CYBERSECURITY - THE GREAT CHALLENGES OF THE TIME FOR DIGITAL ORGANISATIONS.....</b>	<b>213</b>
6.1. The cashless society.....	213
6.2. Internet access, a fundamental human right? The digital divide and the information society.....	214
6.2.1. Territorial statistical analysis. Business access to the Internet, the use of RFID and the use of analytics programs for marketing purposes.....	217
6.2.2. Statistical analysis of time series on the evolution of the number of Europeans ordering online and the evolution of the number of companies receiving orders online.....	219
6.2.2.1. The evolution of the number of people who use the Internet to order products or services online.....	219
6.2.2.2. The evolution of the number of companies that receive orders online.....	220
6.3. The ubiquity of cyber attack risk. Visual network analysis using Java method.....	221
<b>CHAPTER 7. DIGITAL MARKETING STRATEGIES AND TRAINING PROGRAMS.....</b>	<b>227</b>
7.1. Digital divide mitigation.....	227
7.1.1. European Digital Consumer Initiative (CED).....	227
7.1.2. "Go Cashless" Campaign.....	228
7.2. Strengthening the micro-enterprises and SMEs' resilience through digital marketing.....	230
7.2.1. Start with Digital Programme(SwD).....	230
7.2.2. CyberSMEs Programme.....	232

7.3. Enhancing the performance of micro-enterprises and SMEs through digital marketing .....	233
7.3.1. EduSMEs Programme .....	233
7.3.2. Digital SMEs Academia.....	234
7.3.3. National Network of Digitized Enterprises Programme (RNID).....	235
<b>GENERAL CONCLUSIONS.....</b>	<b>237</b>
<b>PERSONAL CONTRIBUTIONS AND RESULTS DISSEMINATION .....</b>	<b>239</b>
<b>FUTURE RESEARCH DIRECTIONS .....</b>	<b>241</b>
<b>BIBLIOGRAPHY.....</b>	<b>243</b>
<b>ANNEXES .....</b>	<b>269</b>
Annex 1. Interview guide: Qualitative marketing research - focus group .....	269
Annex 2. Content analysis grid - Qualitative research - focus group .....	271
Annex 3. Interview guide: Qualitative marketing research - in-depth interview .....	278
Annex 4. Content analysis grid. Qualitative research - in-depth interview.....	279
Annex 5. Summary table - Results of quantitative research.....	289
Annex 6. Quantitative Marketing Research Survey (1).....	294
Annex 7: Contingent table (target audience and field of activity).....	296
Annex 8. Quantitative Marketing Research Survey (2).....	297
Annex 9: Frequency table of the sample regarding the field activity .....	300
Annex 10: Gini coefficient. Countries with people with or above basic digital skills.....	301
Annex 11: Territorial series. Ranking, calculating score, variance and standard deviation .....	302
Annex 12: Chronological series regression. The evolution of the number of people who order products and services online .....	304
Annex 13: Chronological regression series. Evolution of the number of European companies receiving online orders.....	305

## NOTATION LIST

$H_0$  – null hypothesis

$H_1$  – alternative hypothesis

$\alpha$  – level of significance

E – allowed error

z – normal distribution

n – adjusted sample size

$E^2$  – the square of the allowed error, expressed as a percentage

$z^2$  – the square of the coefficient z

p – the percentage of favorable answers in all cases

q – the percentage of unfavorable answers in all cases

$n_0$  – recommended sample size, initially determined (1067)

N – population size

$t_{obs}$  – critical report

$S_p$  – standard deviation

$t_{\alpha,df}$  – the theoretical value related to the level of significance and the degrees of freedom

df – degrees of freedom

$\chi^2$  – Chi-Square test for hypothesis testing

ANOVA – Analysis of Variance

Asymp. Sig – Asymp significance level. Sig.

O – objective

K – dimensions

m – number of questions in the questionnaire

r – explanatory factors

s – dimensions

t - indicators

v - verification questions

$\mu$  - average at the level of the researched population

$\mu_{micro}$  – mean in the case of micro-enterprises

$\mu_{mic}$  – mean in the case of SMEs

$\mu_{profit}$  – the mean at the level of enterprises that registered a profit at the end of 2020





$\mu_{\text{pierdere}}$  – the mean for enterprises that recorded a loss at the end of 2020

$\mu_{\text{rural}}$  – the mean at the level of rural entrepreneurs

$\mu_{\text{urban}}$  – the mean at the level of urban entrepreneurs

F2 - frequency for companies that have recorded a loss

F1 – frequency for companies that have registered a profit

$f_{\text{DA}}$  – frequency of answers with "YES"

$f_{\text{NU}}$  – frequency of answers with "NO"

$S^2$  – dispersion

S – standard deviation / mean square deviation

$\beta$  – regression coefficient

R – correlation coefficient

$R^2$  – coefficient of determination

$R^2_{\text{ajustat}}$  – adjusted coefficient of determination

## LIST OF ABBREVIATIONS

APMM - Analytical method for prioritizing processes

AHP – The hierarchical analytical process

AI – Artificial intelligence

AML – Digital maturity level

APMM - The maturity model of the analytical processes

APMM - The model of analytical maturity processes

BCG – Boston Consulting Group model of digital maturity

CA – Turnover

CFS - The theory of contingent free transport

CLS - Cumulative Layout Shift

CrUX - Chrome User Experience

CS - Collaborative enterprises

DS - Digitized enterprises

FCP - First Content Paint

FID - First Input Delay

GA – Google Analytics

IM - Enterprises with management involved

IS - Initiating enterprises

LCA - Adopters of the learning culture

LCP - Contentful Paint

MSST - Mobile Site Speed Test

OPI – The importance of online presence

PSI - Page Speed Insights

RFID - Frequency Identification Tool

SEM – Search Engine Management

SEO – Search Engine Optimisation

SMM – Social Media Management

SS - Strategic enterprises

TmS – Aplicația Test My Site

## INTRODUCTION

The digital transformation of SMEs and the concern to integrate them into a Digital Single Market at European level is a current topic and a priority on the European Commission's list with a long-term vision. However, recommendations for adapting to the digital transformation of society, trade, consumption patterns and the internationalization of goods cannot be easily implemented. Moreover, in this context, the adoption of digital technologies or the emergence of new concepts such as digital citizenship or the Digital Compass are real challenges. On one hand, performance of firms to adopt the principles of the new information society and, on the other hand, the training delivered to entrepreneurs to align with these priorities has a massive influence on the development of a constantly evolving entrepreneurial ecosystem.

Concerned about the resources and availability of Romanian SMEs to participate in this process of digital transformation and adaptation, the author tried to discover how the resilience of the Romanian entrepreneurial ecosystem can be developed through digital marketing technologies, ensuring the minimum presence of businesses to sell products with Internet, especially in crisis situations. The research methodology approached in the doctoral thesis is based on both classical research methodologies in the field of marketing, along with some less adopted ways to analyze the entities included in the study.

The research activity involved in the foreground the discovery of the potential for the research topic, and in this sense three qualitative marketing research was elaborated. The first two were represented by the focus group method, in which the concerns, fears and needs of Romanian entrepreneurs were analyzed in relation to ensuring the minimum digital presence of business. The second was qualitative research in the form of in-depth interview, in which the emotions and concerns of entrepreneurs regarding the development of business through digital marketing were discovered, especially in the context of the pandemic year. The results led to quantitative research which was started to continue and scale the studies. These were supplemented with four methods of qualitative analysis elaborated with secondary data to find out how ready Romanian companies are for a process of adopting digital marketing. In this sense, the author analyzed technological performance with tests such as Page Speed Insights or Mobile Page Speed; what is the level of optimisation of the consumer's journey by using a minimum level for the free delivery of online orders; the adoption of artificial intelligence technology in the process of communication with users by retailers and what is the ideal model of the digital competitor. Their role was to identify the entrepreneurs of people who run businesses with digital potential and the opportunities and solutions for business development.

The most interesting results show an equal attitude among entrepreneurs who have suffered from certain experiences with specialists in the field when they delegated the digital marketing activity, or when they discovered that the pandemic year did not bring them profits, compared to previous years. Regardless of the past, the vast majority of entrepreneurs are particularly interested in the intention to intensify marketing, but under certain conditions. Discovering this extremely important aspect for future research directions, the author tried to find the most suitable solutions for the Romanian entrepreneurial ecosystem in the context in which the adoption of basic technologies in

digital marketing is low, but entrepreneurs self-evaluate their digital knowledge as at least intermediate, and they no longer want specialized support due to disagreeable experiences.

With a major impact on the evolution of the information society, these behaviors must be approached from both an academic and managerial perspective. For this reason, a set of analysis have been carried out in Chapter 6, in order to prepare a large-scale training program relevant for digital marketing field and to meet the need for micro enterprises and SMEs to survive and develop an integrated and continuous digital transformation process. The results of the analysis favored to design seven programs with three main themes, (1) digital divide mitigation, (2) increasing resilience and (3) increasing the digital marketing performance of the entrepreneurial ecosystem of digital decade.

The digital development of micro-enterprises, small and medium-sized enterprises and people involved in business is a priority not only at national but also European level. Representing the backbone of the economy, the 23 million micro, small and medium-sized enterprises in the EU-27 (European Commission, 2021c) are vital for sustainable development at local, national and regional level (European Parliament, 2020). "The context of the coronavirus crisis has shown how important it is for citizens and businesses to be connected and able to interact online," and the report published by the European Economic and Social Committee (European Commission, 2017) indicates recommendations for adaptation to transformation. digitalization of society, trade, consumption patterns and the internationalization of goods.

The same report mentions the need to involve academia in preparing these companies for training in digital technologies in various fields and the use of certain tools. At the same time, the focus of the European Commission's Euromed Monitoring Committee to support the digital transformation of enterprises also shows a strong concern for socio-economic development, in particular to combat unemployment and reduce gender disparities (European Commission, 2019a). However, improving the business environment requires unlocking the potential for development and digitalisation (European Commission, 2019b) and the strategy for Union enterprises encourages the entrepreneurial environment, in the green transition and the digital transition (European Commission, 2020). In this context, not only the enormous potential of the Digital Single Market should be taken into account for arguing the digital development of micro, small and medium-sized enterprises, but also their ease of addressing the target audience directly and increasing their competitiveness in the local market through commercial communication and online promotion of the enterprise (European Commission, 2021d).

Moreover, the vision and prospects for 2030 are transposed through the "compass for the digital dimension" (European Commission, 2021a). It places business transformation among the other three areas, Skills, Secure and Sustainable Digital Infrastructures and the Digitization of Public Services, around which revolve principles and rights for the adoption of European digital citizenship (European Commission, 2021b)

Therefore, the performance of micro-enterprises and SMEs in adopting a digital culture will be a strong point for adapting to the new market demands, especially in the context of "Europe wants to prepare its businesses and citizens for a sustainable and more prosperous future," focused on the human factor".

## THE DOCTORAL THESIS AND THE RESEARCH KNOWLEDGE FIELD

The paper falls into the fundamental field of Social Sciences, branch of Economic Sciences, Marketing, the author addressing important issues regarding the adoption of digital marketing technologies and tools to increase the online presence of micro-enterprises and SMEs in Romania.

The growth of digital marketing is the most important and least predictive trend in marketing (Tapp, 2005; Tapp, Whitten and Housden, 2013; Faruk, Rahman and Hasan, 2021), and the literature presents the opportunities that companies can have via the Internet: building relationships with consumers and prospects, generating new potential customers, growing the database with consumers, implementing the Internet in strategy as a sales tool, especially in the case of online commerce where transactions are made exclusively online and using technology to improve business processes (Intranet for improving internal management and Extranet for streamlining value chain management, customer support, technical support and e-mail communication) (Mohapatra, 2000; Grewal et al., 2020; Arhas et al., 2022).

In this context, the need to align the priorities of companies with the needs of connected consumers can be the advantage for the continuation of the activity of some of them, and for others, the key factor for survival in a competitive, ever-growing market. The approach from this point of view of the Romanian entrepreneurial ecosystem enriches both the specialized literature in the field, but also represents the foundation for the academic environment in order to prepare specialists for guiding and establishing the trajectory for future entrepreneurs. The results of the research developed and presented in the doctoral thesis have the role of highlighting the weaknesses of the entrepreneurial ecosystem and analyzing the extent to which companies respond to the growing need for digital consumers to interact in the virtual space.

The potential of digital business models is increasingly being questioned (Vlahvei, Notta and Grigoriou, 2013; Boston Consulting Group, 2018; Google, 2020), with four determinants that positively influence digital business models: performance indicators, individualization, efficiency and communication. In the structural equation model (SEM), it is assumed that these determinants positively and directly influence the potential of the digital business model. Thus, the digitalization potential that a business presents, is distinguished by the entity's ability to establish and analyze performance indicators but also by materializing individualization (by increasing the attractiveness of products, by approaching customers differently, improving services delivered to the customer). At the same time, the efficiency determined by the reduction of the frequency of errors, the generation of large amounts of Big Data, the increase of automation and the support of sharing concepts are a decisive factor when it comes to the potential of developing a business in the digital environment. The communication process completes the picture of the requirements for a business to outline a digitalization potential, by improving the decision-making process, developed internal cooperation, but also improved external cooperation. Thus, the author wanted to present the differences between digitalized and non-digitalized businesses, to illustrate the benefits of adopting new technologies in applied marketing in organizations. In a constantly changing context, the digital transformation will be the path to the success that companies want.

## THE OBJECTIVES OF THE DOCTORAL THESIS AND RESEARCH METHODOLOGY

Considering the importance and priority nature of the subject, the theme of the research is closely related to the level of performance of enterprises active on the online services market in Romania. The aim was to discover the level of performance of micro, small and medium-sized enterprises and to understand how they can adapt to the new context. Therefore, the scientific novelty is reflected on the one hand by the multidimensional approach of the Romanian entrepreneurial ecosystem which includes micro-enterprises and SMEs and on the other hand by the alignment of the proposed goal with the priorities of the European Union, which aims to intensify the digital transformation of these entities.

The author intended to find new solutions for the Romanian entrepreneurial ecosystem in order to increase the digital resilience, so necessary for the digital future and the ever-changing Information Society. To achieve this goal, a set of research was launched based on both classical methods and methods that involve the use of secondary data or special software.

Depending on the chosen method, a centralisation was performed in Table 1.

**Table 1: Centralisation of research conducted in the paper**

No.	Research type	Method	Title	Number of observations
1	Qualitative	Focus group (1)	"Developing the entrepreneurial ecosystem through digital marketing for micro-enterprises and SMEs."	8
2	Qualitative	Focus group (2)	"Developing the entrepreneurial ecosystem through digital marketing for micro-enterprises and SMEs."	8
3	Qualitative	In-depth interview	"Opinions and attitudes of Romanian entrepreneurs on the digital transformation of micro-enterprises and SMEs through digital marketing."	10
4	Qualitative	Analysis using Page Speed Insights and Mobile Site Speed Test	"Analysis of online stores certified with the Trusted Mark in terms of technological performance in terms of loading speed."	16
5	Qualitative	Analytical Method of Hierarchy of Processes	"Modeling a framework for stimulating the behavior of digital buyers by retailers."	N/A
6	Qualitative	The mysterious shopper	"Analysis of the quality of AI solutions implemented by retailers in the communication process."	10
7	Qualitative	Analytical Method of Hierarchy of Processes	"Analysis of the potential of micro-enterprises and SMEs in the process of digital transformation."	N/A
8	Quantitative	Survey-based research	"Opinions, attitudes and behaviors of Romanian entrepreneurs regarding the minimum presence of micro-enterprises and SMEs in the virtual space."	972

9	Quantitative	Survey-based research	"Opinions, attitudes and behaviors of entrepreneurs regarding the development of micro-enterprises and SMEs in Romania through digital marketing."	832
10	Qualitative	Statistical analysis to identify inequalities (Gini coefficient)	"Statistical analysis to identify inequalities between EU member states, targeting people with or above basic skills."	28
11	Qualitative	Statistical analysis at the territorial level	"Business access to the Internet, use of RFID and use of analysis programs for marketing purposes."	28
12	Qualitative	Statistical analysis at the territorial level	"Statistical analysis of time series on the evolution of the number of Europeans ordering online and the evolution of the number of companies receiving online orders. "	12
13	Qualitative	Statistical analysis of the time series	"Evolution of the number of companies receiving online orders."	12
14	Qualitative	Visual network analysis by Java method	"The ubiquity of cyber attack risk."	5287

(Source: created by the author)

**Qualitative research (focus group):**

- a. Identifying the level of awareness of entrepreneurs about the role of digital marketing in the development of the organization they lead.
- b. Discovering the motivations of entrepreneurs regarding the use of digital marketing tools.
- c. Analysis of the way in which entrepreneurs perceive tracking tools in order to know their target audience.
- d. Analysis of entrepreneurs' attitudes towards education in the field of digital marketing.

**Qualitative research (in-depth interview):**

- a. Identifying the opinions of Romanian entrepreneurs regarding the digital transformation through the online presence of the business.
- b. Determining the attitudes of entrepreneurs towards the adoption of digital marketing tools.
- c. Discovering the perception of entrepreneurs regarding the profile of consumers in the virtual space.
- d. Locating the positioning of Romanian entrepreneurs in relation to online advertising methods.

**Qualitative research on optimizing the purchase journey of consumers of online services in Romania:**

- a. Analysis of online stores certified with the Trusted Mark in terms of technological performance related to page loading speed.
- b. Modeling a framework for stimulating the behavior of digital buyers by retailers.
- c. Analysis of the quality of AI solutions implemented by retailers in the communication process.

d. Analysis of the potential of enterprises in the process of digital transformation.

**Quantitative research (1):**

- a. Identifying the degree of awareness of the role that digital marketing has within the organization.
- b. Determining the degree of use of digital marketing tools for the development of micro-enterprises and SMEs in Romania.
- c. Quantifying the perceptions of entrepreneurs regarding digital marketing and the exposure of companies in the online environment.
- d. Identifying the degree of awareness of entrepreneurs regarding the interaction with customers in the digital environment.
- e. Determining the attitude of entrepreneurs towards the advantage of digital marketing to measure results.
- f. Finding out the number of online campaigns that Romanian entrepreneurs run.
- g. Identifying the attitude of entrepreneurs towards the tools of tracking and identifying the target group.
- h. Quantifying the digital skills of entrepreneurs.
- i. b. Discovering the intentions of entrepreneurs regarding digital education.

**Quantitative research (2):**

- a. Measuring the level of interest of entrepreneurs for specific applications of digital marketing.
- b. Quantifying the self-assessed level of digital knowledge of entrepreneurs.
- c. Determining the importance of online presence perceived by people running a micro-enterprise or SME.
- d. Indication of the factors that prevent entrepreneurs from developing a digital business presence.
- e. Determining the barriers that determine a low presence.
- f. Establishing the links between certain indicators of the company and the online presence.
- g. Identifying the digital marketing tools implemented by micro-enterprises and SMEs in carrying out their activity.
- h. Determining the performance of micro-enterprises and SMEs in the analysis and monitoring of users who have contact with company brands.
- i. Measuring the level of use of web applications to discover trends in search engines
- j. Discovering the future intentions of entrepreneurs regarding the development of micro-enterprises and SMEs in which they are involved.
- k. Identifying intentions to grow your business and expand across borders through online means.
- l. Identify the main problems that entrepreneurs intend to solve regarding the digital presence.



- m. Determining the extent to which entrepreneurs engage in collaboration with specialists to obtain.
- n. Classification of micro-enterprises and SMEs at national level according to certain variables.
- o. Determining the links between the characteristics of the studied organizations, entrepreneurs and certain research variables.

The objectives for each research were set in order to integrate complementary results, which would contribute to a marketing program relevant to the type of business analyzed. The results of the research conducted are detailed in each chapter.

## THE STRUCTURE OF THE THESIS

The structure of the doctoral thesis comprises seven chapters, first of all being introduced the theoretical and methodological aspects regarding digital marketing. This chapter is followed by the current state of knowledge in the field and aspects of connected consumer behavior - an influential factor in the development of the entrepreneurial environment. The first chapter that presents the elaborated marketing research is the fourth chapter, entitled *The digital transformation of micro-enterprises and SMEs and the optimization of the purchase journey of online services in Romania*. Chapter 5 introduces quantitative research aimed at capturing the performance of micro, small and medium enterprises and Chapter 6 presents the *Cashless Society*, the *digital divide* and *cybersecurity* as the great challenges of the moment for digital organizations. Chapter 7 introduces marketing strategies and programs and the last part of the paper is devoted to general conclusions, personal contributions, dissemination of results, and future research directions.

Within the 305 pages there are 139 tables and 74 figures, their lists being found in the first part of the paper. The doctoral thesis presents a relevant scientific basis for the research topic, being represented by the 403 bibliographic resources, books, scientific articles in the field of digital marketing and related fields, reports and guides for using software programs.

In the first chapter, *Theoretical and methodological aspects of digital marketing*, the author introduced the knowledge base of the field, consisting of the elements necessary for a good understanding and easy reading of the content of the paper. Thus, key terms, concepts, but also methodological aspects were defined and presented. The chapter was structured in two parts, the first being called *The evolution of marketing and the new digital age for micro-enterprises and SMEs*, introducing the ubiquitous dilemma in digital business, namely, *What actually causes users to click?* The second part was dedicated to the presentation of the *Concepts and methodologies applied in digital marketing*, starting from the marketing mix adjusted to the digital age and reaching in a logical way, from general to particular, the introduction of concepts such as sales funnel, business cycle, p, the role of Search Engine Optimization (Yalçın and Köse, 2010) (hereinafter SEO) and heatmaps in eye tracking studies. Within the same chapter were introduced the aspects regarding the usability of the website and the user experience, Search Engine Management (hereinafter SEM) and Social Media Management (hereinafter SMM), the last part of the subchapter being allocated to the integrated strategy.

The second chapter presents the current state of knowledge in the field of digital marketing, being structured in two subchapters. In the first stage, the systematic analysis of the specialized literature was presented, more precisely the comparative analysis regarding the undigitalized business the ecosystem of the digitized business from the perspective of the IDITAROD model; digital transformation of enterprises through marketing, digital maturity modeling through the analytical processes model (APMM) and the BCG model of digital maturity, finally being presented the award models in digital marketing. The current state of knowledge of the entrepreneurial ecosystem in Romania began with the current context in which digital marketing and the activity of micro-enterprises and SMEs were described together, concluding with a record of the last five years from the perspective of the online presence of micro-enterprises and SMEs. and digital skills of entrepreneurs.

Chapter three is entitled *Connected Consumer Behavior - an influential factor in the development of the business environment* and presents the transition from e-commerce to m-commerce, the reasons for the need to optimize interaction points in the consumer journey, the role of artificial intelligence in e-commerce, interaction points, the loading speed of the website on the mobile device, the impact of the delivery policy on the purchasing behavior and the model of competitive buying behavior. The literature draws attention to consumer behavior and decisions that can be influenced by a variety of factors. Online activity has become strongly influenced by the development of commerce in the digital environment (Voineagu et al., 2016), a major challenge being the behavioral evolution of consumers, intensely accelerated by the adoption and application of technology in everyday activities (Young, 2014; EY, 2020). In this context, retailers delivering services and products through the digital environment are in a position to keep pace with the changing evolution of consumer behavior in the digital age. The new standards of e-commerce are based on traditional marketing theories, with an added perspective of understanding the behavioral characteristics existing in the digital environment. Discovering new consumer information and creating value are proposals that offer higher levels of satisfaction (Jílková and Králová, 2021).

The fourth chapter refers to the research carried out in the doctoral thesis and was designed to understand the state of micro-enterprises and SMEs on the marketing activity carried out in the digital environment. To present the results, a logical structure was developed based on a chronological order based on the performance of the three types of qualitative research. The first of them refers to the development of the entrepreneurial ecosystem through digital marketing for enterprises, being carried out by the method of the focus group in January 2020. The second research, such as the in-depth interview (conducted in July 2020) completes the scenario the situation in which the companies studied in the first research were described, presenting the main concerns of entrepreneurs regarding uncertainty and feelings of insecurity during the pandemic, in order to highlight concerns about the digital transformation of the organizations they lead in this context. The third part of the chapter was dedicated to a set of qualitative research conducted on the basis of secondary data between September 2020 and March 2021 and covers 1) an analysis of online stores certified with the Trusted Mark in terms of technological performance related to upload speed, 2) modeling a framework for stimulating the behavior of digital buyers by retailers 3) a content analysis of the most visited e-commerce websites in the country made by the mysterious customer method on artificial intelligence used in the process of communicating with customers in space and 4) an analysis of the potential of enterprises in the process of digital transformation.

The fifth chapter is a continuation of chapter four, the author conducted quantitative marketing research in order to scale the elaborated study. The ideas and aspects resulting from the performance of the qualitative research was considered extremely relevant for the continuation and deepening of the studied topic. Thus, in order to investigate in more detail the topic on the development of micro-enterprises and SMEs through digital marketing and to try to extrapolate the results obtained, two surveys were conducted based on a survey on the behavior of Romanian entrepreneurs in relation to digital marketing. The research question quantitative marketing research was represented by How can Romanian companies develop a strong resilience through digital

marketing in the current context ?, the results providing the ideal context to continue and propose concrete solutions for drawing up a concrete program in marketing digital.

Chapter six aims to complete the previously described chapter and, through its theme, the author placed in the context of the trilateral challenge, the need for micro-enterprises and SMEs to intensify their digital transformation through digital marketing. Thus, key concepts such as the cashless society, the digital divide and cybersecurity were the basis for its realization. Internet access, considered a fundamental human right, companies with broadband network access, companies using the radio frequency identification tool (RFID) and companies using software solutions in the analysis of customer information for marketing purposes have been used for three statistical analyzes in territorial plan or chronological series. These were complemented by a comparative analysis of supply and demand expressed by the evolution of the number of people using the Internet to order products online and the evolution of the number of European companies receiving online orders in order to understand the development potential of micro, small and medium enterprises. in the context in which the application is not covered. Finally, Chapter 6 presents a major challenge of the moment, namely the ubiquity of the risk of cyber attacks. In order to discover the major research areas in the field, an analysis of the visual network was performed, using the Java method and the Citespace software.

Finally, chapter seven presents marketing strategies and programs in order to reduce the digital divide, increase performance and develop micro-enterprises and SMEs in Romania. In this regard, seven programs have been designed to develop the entrepreneurial ecosystem. The chapter is followed by the presentation of the general conclusions of the doctoral thesis through which the main ideas of the approached topics were recapitulated. The doctoral thesis presented so far the specific concepts of digital marketing, the current state of knowledge and important aspects related to consumer behavior. Moreover, the qualitative research carried out generated the vibration that Romanian entrepreneurs have regarding the minimum digital presence and the transformation through digital marketing. The content analyzes and tests on the technological performances of the studied entities generated results that were the basis of the quantitative research presented in Chapter 5. Subsequently, the major challenges of the moment were integrated in the paper, including the impact of payment methods on the digital future. the digital divide caused by various factors, while emphasizing the need to meet the demand over time to provide the framework for ordering online services and products to consumers already present in a large digital market. Finally, the field of cybersecurity research was presented in order to raise awareness of the importance of the field, especially in the current context.

The presentation of all the chapters that highlight details about the listed topics created the perfect framework for the introduction of proposals by the author, based on analysis, qualitative research, but also quantitative research. These have materialized in the form of strategies for implementing seven program concepts with a single goal: the development of the entrepreneurial ecosystem through digital marketing. Although concepts that are more closely linked to consumer activity than to business will be addressed, the programs aim to prepare buyers more and more for a technologically troubled, ever-changing market. In this way, it is considered that the digital transformation will be intensified, an extremely important element in the European Commission's 2030 strategy. The chapter is structured in three approach themes, for each of them there is at least one proposed program. In the first stage, programs were introduced in order to reduce the digital

divide and increase the level of information and awareness on trends in the digital future, inherent in the information society. The first topic addressed was to reduce the digital divide. The digital divide is seen as a threat because consumer behavior without access to technology, or without digital skills can affect the performance and process of digital transformation, with businesses having access to a limited market because of this. Therefore, in the foreground chapter, reference was made to the digital gap of potential customers that micro-enterprises and SMEs in Romania present. Although it can be seen more from the perspective of individuals and not of enterprises, the digital divide can be reduced by the activity and stimulation carried out by companies, in their interest. The programs presented in the program were designed to prepare and align consumer behavior, synchronizing the priority of enterprises to intensify the activity of digitization through marketing in the virtual space.

The second topic referred to the development of entrepreneurs from a digital point of view and the performance of the enterprises they run. Based on all the results of the research, a three-month training program has been designed, in which entrepreneurs learn in an assisted way how to manage their digital marketing activity so that they can take care of the necessary actions on their own in the future. Qualitative research such as the focus group and the first quantitative research on the minimum digital presence revealed that Romanian entrepreneurs do not want to collaborate with specialists in the field, but want to learn what digital marketing entails. In response to this need, the SwD (Start with Digital) program was created, which includes implementation strategies to ensure all the performance discovered and necessary for a sustainable transformation. Also, in order to support the great challenge related to cybersecurity, an information and education program, called CyberIMM, was devised.

Finally, seven marketing programs represent strategies that target both academia and the business environment, with micro-enterprises and SMEs representing the direct beneficiaries. The initial expectation before starting them is to attract at least 20% of the studied samples of quantitative marketing research, their evaluation being done at the end of the implementation period.

## GENERAL CONCLUSIONS

The recommendations submitted by the European Economic and Social Committee are perfectly in line with the aim and results of the research carried out, as it brings value in adapting to the digital transformation of society, trade, consumption patterns and the internationalization of goods. Moreover, the issues addressed in the research are synchronized with the Digital Compass from the perspective of transforming micro-enterprises, SMEs and digital skills of entrepreneurs. Along with the marketing program of the National Network of Digitized Enterprises, the third element can be taken into account, the legislative element within the Compass.

Findings on the digital tools used to manage online presence, the needs of entrepreneurs and the need to increase the performance of web page uploads are prospects for concrete actions to combat unemployment and reduce gender disparities, as the analysis of primary data carried out with the occasion of the research revealed valuable information for the elaboration of future marketing strategies. The fact that 100% of the subjects declared themselves interested in digital marketing applications, provides the ideal framework for exercising proposals for Transforming businesses into the "digital dimension" taking into account the marketing mix adjusted to the digital age by specific concepts such as sales funnel, user buying cycle, SEO role, website usability and user experience, SEM, SMM and integrated strategy. Also, the application of the models identified in the literature (IDITAROD, BCG model of digital maturity) and awarding models are extremely relevant tools in the digital transformation of enterprises.

In contrast, connected consumer behavior is the factor to be taken into account, especially if the company is in transition from e-Commerce to m-Commerce. In this regard, special attention must be paid to the constant optimization of the points of interaction in the journey of consumers. Communication with digital users and buyers is imperative, and the results obtained show the huge potential for development in the implementation of AI solutions. The reaction to the application of free delivery conditioned by a minimum value is also part of the register of connected consumer behavior.

At the national level, entrepreneurs perceive the importance of online presence on the search engines of the business in which they are involved, evaluating it with over 4 points on a scale from 1 to 5, where 1 presents the statement for totally unimportant and 5 for very important. A considerable number of companies are presented online with the help of an official website, followed by the My Company on Google application, which provides a presence in the search engine of the same name.

The close link between the intention to step up online activity and the intermediate level of knowledge forms the favorable framework for exploiting the development potential of micro-enterprises and SMEs on the market for 2 years, in which there are no employees and working in the service fields, trade, production and technology.

In this context, not only the enormous potential of the Single Digital Market would have developed, but also the Romanian society. The support given to those who presented the need for support in solving problems related to the management of the Google Ads account, the optimization of the campaigns carried out in the platform and the analysis of some case studies, would contribute to the integration of a greater number of females in the entrepreneurial ecosystem. The intention of

all entrepreneurs who have expressed the desire to intensify their activity through specific applications of digital marketing would be an opportunity, especially in the context in which they present digital knowledge at intermediate level and the industry in which they operate or the size of the company are not variables that it would influence their behavior.

Moreover, it has been shown by the analyzes performed that the financial performance affected by the health crisis is not a determining factor for the change in behavior or perception of entrepreneurs. On the contrary, the desire and intention of education on digital marketing favors the inclusion in the paper of marketing strategies and programs designed to increase resilience by addressing the information society of the future, by reducing the digital divide in consumer interaction with businesses.

The information society and the great challenges that businesses will face in the digital future offer their opportunity to demonstrate strong resilience and sustainable development, at least in the light of the elements addressed above. Luarea în considerare de către manageri și antreprenori a unei posibile lumi, diferite, în care numerarul nu mai există, ar trebui să provoace specialiștii, mediul academic și părțile terțe pentru o integrare lentă, dar sigură, inerentă supraviețuirii Societății din viitor. Diminuarea decalajelor digitale prin îmbunătățirea și fructificarea potențialului clienților care prezintă nivelul de bază al cunoștințelor digitale de către antreprenori ar putea plasa întreprinderile într-un loc sigur și prosper în viitorul apropiat. Mai mult de atât, diferențele inexistente între țările europene privind accesul la rețea prin bandă, utilizarea infrastructurii sau utilizarea soluțiilor software pentru analiza informațiilor despre clienți în scopuri de marketing sunt aspecte importante de avut în vedere în crearea unei strategii pentru creșterea rezilienței digitale.

Furthermore, covering the need to ensure demand for ordered products presents the potential and market need that digital businesses can cover. Instead, they will develop and integrate into a Digital Single Market.

Finally, the concern for cybersecurity, a major challenge of the moment, reveals the need to provide support for companies that do not know the field, but are aware of the risks involved in carrying out the activity.

## PERSONAL CONTRIBUTIONS AND DISSEMINATION OF RESULTS

The doctoral thesis was elaborated in its entirety by attaching the concept of digital marketing to the Romanian entrepreneurial ecosystem. In order to develop micro-enterprises and SMEs through the presence in the virtual space and through the performances on this subject, the novelty of the paper is reproduced by the ***challenges and solutions promoted in order to achieve a strong resilience in the digital future and information society.***

The entire work was designed to meet the criterion of originality, all personal contributions made supporting this fact.

From the first chapter, the theoretical and methodological aspects of digital marketing were presented, the author relying on scientific resources, analysis, reports or results of top international agencies. The integration of the information obtained in this way did not alter in any way the original character of the paper, on the contrary, by using them it was possible to support the scientific and practical arguments highlighted.

***The current state of knowledge in the field of digital marketing*** was addressed in an original note, although it was based on scientific resources. The chapter presents the combination of systematic analysis of the literature with the current state of knowledge of the entrepreneurial ecosystem, attaching to the first subsection the evolution of the last five years in terms of digital presence and digital skills of entrepreneurs. ***The original wording is also found in the case of the third chapter,*** where the behavior of the connected consumer was analyzed, as an influential factor in the development of the entrepreneurial environment. The transition from e-commerce to m-commerce and addressing the topic of optimizing the points of interaction in the shopping journey were the personal way to achieve Chapter 3 and add to the doctoral thesis the behavioral dimension of the connected consumer.

At the same time, the author carried out ***original qualitative research,*** regarding the digital transformation of micro-enterprises and SMEs and the optimization of the purchase journey of online services in Romania. The set that makes up chapter four was ***originally designed*** to identify starting points for quantitative research, and analyzes based on secondary data complemented the author's style of approaching the paper.

Marketing research was conducted through a mix of basic and some innovative methods, presenting the author's ability to complete the necessary qualitative and quantitative research with ***new methods of analysis, using specific software.***

The first research presented in the paper involved interviewing 16 entrepreneurs to identify how entrepreneurs are positioned in relation to the development of the entrepreneurial ecosystem through digital marketing. The results show the desire to increase the digital presence of micro-enterprises and SMEs by increasing the level of knowledge required, but also the intention to learn how to achieve an integrated digital promotion strategy using specific tools.

The quantitative marketing research entitled "Opinions, attitudes and behaviors of Romanian entrepreneurs on the minimum presence of micro-enterprises and SMEs in the virtual space" was developed against the need to continue the study developed through qualitative research such as focus group. The results obtained by direct interviewing the 16 entrepreneurs highlighted important



issues such as awareness of the role of digital marketing in business development, entrepreneurs' motivations for using digital tools to sell services or products, attitude towards data analysis tools and attitude compared to online advertising.

The research conducted through the in-depth interview "Opinions and attitudes of Romanian entrepreneurs on the digital transformation of micro-enterprises and SMEs through digital marketing" is a personal contribution of the author, conducted to analyze entrepreneurs' perceptions of digital transformation and in relation to certain specific concepts marketing carried out in the virtual space in full pandemic context.

Furthermore, a set of analyzes was performed based on secondary data that determined the inclusion in the doctoral thesis of the personal contribution regarding the qualitative research regarding the optimization of the purchase journey of the consumers of online services in Romania. The design of the set was an own creation and represented the analysis of online stores certified with the Trustmark in terms of technological performance in terms of loading speed, modeling a framework for stimulating the behavior of digital buyers by retailers, analyzing the quality of AI solutions implemented by retailers in the communication process and the analysis of the potential of micro, small and medium enterprises in the process of digital transformation.

***Another major contribution of the author*** was represented by chapter 6, which was made by performing, in turn, four analyzes, three of them being statistical, and one of them was made using Java technology to create the visual network in the field of cybersecurity research. The chapter was followed by marketing strategies and program, created and proposed exclusively by the author.

The dissemination of the research was carried out through the scientific conferences in which the author participated during his studies and through the scientific publications.

## FUTURE RESEARCH DIRECTIONS

During the period of accomplishing the doctoral thesis and on the background of the elaboration of the research, various preoccupations appeared regarding future research directions, the author pointing out some in the continuation of this chapter. Given the researched topic and the dynamic nature of the field to which digital marketing belongs, it can be said that there are some differences between what the author initially proposed and the final result. However, this is seen as an opportunity to continue the studies carried out, especially since within the existing context during the three years there have been major changes in the field. The results presented in the doctoral thesis are starting points for future research directions, and in this regard, the author formulated the following ideas:

- Qualitative marketing research such as the focus group in which the development of the entrepreneurial ecosystem through digital marketing was considered allows as a research direction the extension of the study at European level, in order to analyze the perspectives and emotional processes of entrepreneurs with market in Europe. digital marketing.
- The quantitative marketing research elaborated considering the results of the qualitative research previously mentioned, determined the author to think about the perspective of including in the research besides the selected digital tools and the content, Social Media Marketing or aspects related to copywriting. Also, the future study can be developed in order to ensure representativeness in the research population.
- The in-depth interview determined the author to propose the elaboration of a quantitative study, using a probabilistic sampling method regarding the perception of entrepreneurs about the digital transformation through the automation of processes in the activity carried out within the company.
- The analysis performed in order to identify the methods of optimizing the consumer journey generated the desire to continue the study on four future research directions: (1) analysis of the interaction points at the researched population in terms of SEO components for marketing elements, (2) analysis of a representative sample to quantify user satisfaction with free delivery at a certain minimum amount, (3) conducting a quantitative study on opinions, intentions and perceptions regarding communication with a social media chatbot in relation to a particular brand; and (4) analysis at the level of a representative sample regarding the level of digital maturity of micro-enterprises and SMEs in Romania.
- The analysis of the basic skills of individuals led the author to propose a quantitative study to quantify the level of digital skills of consumers of online services in Romania.
- The statistical analysis carried out generated the research question: "Should Romania present a percentage of 74% for people who stated that they will never give up cash completely because it is the last place in Europe to use the RFID tool by companies?" . The subject is considered relevant for the continuation of the study and it is recommended to analyze the link by developing a quantitative research at national level.
- Another direction of research emerged following the results of the digital divide and the conviction not to give up cash. Thus, the author proceeded to the proposal to investigate the



connection between the level of consumer education and the conviction not to give up cash, in the light of a quantitative study at the level of Romanian consumers.

- Cybersecurity research has raised significant questions, and scientific analysis based on references can be the basis for qualitative research to discover entrepreneurs' fears, emotions, and positioning about the ubiquitous risks of cyber attacks on the organization's resources. .
- The stated research directions can represent the continuation of the elaborated study, each proposed research having as a starting point the presented results.

## LIST OF PUBLICATIONS

### A. Papers in Web of Science indexed publications

1. Brătucu G., Tudor A.I.M., Litră A.V., Nichifor, E., Chiţu I.B., Brătucu T-O.- Designing the Well-Being of Romanians by Achieving Mental Health with Digital Methods and Public Health Promotion. *International Journal of Environmental Research and Public Health* 2022 19(13) 7668 (Impact Factor JCR 2021 – 4,614, Q1), <https://doi.org/10.3390/ijerph19137868>
2. Brătucu G., Nichifor, E., Sumedrea S., Chiţu I.B., Lixăndroiu R.C. - Avoiding Digital Divide in European Union through European Green Deal. *Amfiteatru Economic* 2022 24(59), pp. 75-92, DOI:10.24818/EA/2022/59/77 (Impact Factor JCR 2021 – 2,304, Q2) [https://www.amfiteatruconomic.ro/temp/Article\\_3065.pdf](https://www.amfiteatruconomic.ro/temp/Article_3065.pdf).
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### B. Papers in BDI indexed publications

Nichifor E., Țierean O. Small and Medium Enterprises Go Digital. 2021 *Bulletin of the Transilvania University of Braşov*. Vol. 12 (61) No. 2 – 2019, <https://doi.org/10.31926/but.es.2019.12.61.2.8>, citat o dată.

### C. Papers published in the volumes of international conferences

1. Nichifor E., Brătucu, G. - Ready for the Next Cyber Threat? Indispensable Assets for Digital Business Organisations. *Journal of Smart Economic Growth*. Vol 7 No 1 (2022): 16-06-2022. <https://jseg.ro/index.php/jseg/article/view/184/114>.
2. Nichifor E., Brătucu, G. - Do Companies Need Neuromarketing for Business Growth? The Consumer Behaviour Perspective. *Proceedings of the 12th International Conference of Doctoral*



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3. **Nichifor E., Brătucu, G.** - How is the digital maturity level shaping the connected consumer future? *Journal of Smart Economic Growth*. Vol 6 No 2 (2021): 6-2-2021. <https://www.jseg.ro/index.php/jseg/article/view/184>

#### **D. Participation in international conferences**

1. **Nichifor E., Brătucu, G.** – Ready for the next cyber threat? Indispensable assets for digital organisations. *Proceedings of the 5<sup>th</sup> International Conference “Inclusive and Sustainable Economic Growth. Challenges, Measures and Solutions” (ISEG), 27 May 2022, Braşov, Romania.*
2. **Nichifor E., Brătucu, G.** - Do Companies Need Neuromarketing for Business Growth? The Consumer Behaviour Perspective. *International Conference of Doctoral Students and Young Researchers “Emerging Markets Economics and Business”, 12th Edition, 9th December, 2021, Oradea.*
3. **Nichifor E., Brătucu, G.**-How is the digital maturity level shaping the connected consumer future? *Proceedings of the 4<sup>th</sup> International Conference “Inclusive and Sustainable Economic Growth. Challenges, Measures and Solutions” (ISEG), 27 May 2021, Brasov, Romania.*

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