

## **INFLUENCE OF INTERNAL AND EXTERNAL FACTORS ON THE INTRODUCTION OF E-BUSINESS AND E-MARKETING IN AGRIBUSINESS**

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### **ABSTRACT**

The emergence of the Internet, the rise of technology and economic globalization stimulate changes in companies' operations, including the inevitable changes in the marketing strategy. One of the main trends in modern marketing is focus on the Internet and social media as most significant tools for promotion. As in traditional marketing, in electronic marketing there are also internal and external factors that influence its implementation. The aim of this research is to analyse the various internal and external factors that influence the introduction of E-Marketing to companies' operations. The sample includes 76 small and medium enterprises (SMEs) from the agribusiness sector in North Macedonia, interviewed with a structured questionnaire. Four groups of factors were isolated, and a detailed explanation was provided of the various aspects that affect the implementation of E-Marketing within the companies. Results showed that the acceptance of E-marketing by agrobusiness SMEs in North Macedonia is significantly affected by the third parties, customers, competitors, and suppliers. Although some E-Marketing tools are already being continuously used, it was noticed a lack of IT capabilities and insufficient management support. Most respondents rated high the need for E-Marketing, with an emphasis on the significant online presence of buyers. The obtained results are especially important for companies that want to encourage an initiative for E-Marketing introduction. It is apparent that there is awareness of E-marketing, yet the companies have to direct their human, financial and technological resources to facilitate the introduction of new technologies and attain support by management and professional team.

**Key words:** internet, e-marketing, e-business, factors, technology

### **INTRODUCTION**

The rise of the modern technology, accompanied by the competition increase on a global scale, the market segregation, and the operational independence increase, contribute to dynamic and structural changes in the modern occupational environment. SMEs are particularly affected by this turn of events. Therefore, the increased number of enterprises that decide to implement new technology and to start using digital media as part of their marketing-efforts, present an opportunity to researches to delve more deeply into the field of e-marketing. Despite the possible barriers that one can face during its adoption, the implementation of e-marketing by the small and medium enterprises can not only create numerous possibilities, but it can also change the form and nature of their business around the world.

The existing research on e-marketing is mainly directed at the large enterprises in developed economies, and a sparse number of studies are focused on the use of digital communication technologies by the SMEs in developing and non-developed countries. In

these countries, more attention is paid on the introduction of e-commerce as a discipline among SMEs (Molla and Licker, 2005; Kshetri, 2008; Jones et al., 2011; Iddris, 2012), with barely any focus on the application of e-marketing from the point of SMEs, particularly in the agricultural business. As a result, this paper attempts to fill the gap in the literature on the examination of the factors which influence the introduction and implementation of e-marketing and e-business in the small and medium businesses in agricultural sector in Republic of North Macedonia.

New e-business and e-marketing technologies provide positive business prospects for both large and small businesses by increasing efficiency (Dubihlela and Ngxukumeshe, 2016), improving business operations (Faloye, 2014), expanding markets, increasing the number of clients, and strengthening the ability to compete internationally (Wanjau et al., 2012). The benefits of SMEs, that go in the direction of the need for investment and adoption of new and modern e-business and e-marketing strategies and technologies at the enterprise and sector level, mainly refer to the improvement of the competitive advantage as well as economic growth at the micro and macro level (Faloye, 2014; Nurhadi et al., 2015). However, despite the potential benefits arising from the introduction and application of new technologies, various studies confirm that SMEs are slow to adopt and use e-business technologies (Hove and Chikungwa, 2013). Their aversion to risk (Nguyen and Waring, 2013), the need to invest in technologies and the limited access to financial resources (Jere et al., 2014), the individual dimension of employees and management (Dauda and Akingbade, 2011) and other factors of an external and internal nature are main reasons for this occurrence. These factors are the purpose of the research in this paper. The analysis covers the determination of internal and external factors that influence the determination of the degree of adaptation of enterprises, as well as their readiness for the introduction of e-business and e-marketing strategies.

## **LITERATURE REVIEW**

### **Small and Medium enterprises**

Small and medium enterprises (SMEs) are the engines of the national economies which play a major role in the overall economic development of every country. SMEs are main source of technological innovation and new products' development. On the first hand, due to their high turnover and adaptability, they have a significant role in the resolution of the regional and sectoral imbalances in the economy of a country; and on the other hand, due to their adaptability and easier market approach, the economies become more flexible and competitive.

In this direction, the literature already covers a wide range. The authors are continuously stressing out the contribution of SMEs towards the employment growth, the gross domestic product (GDP), the development of technological innovation and more. For example, in Europe, 99% of the enterprises are classified as micro, small and medium and they participate with more than 50% of the total turnover and the total employment (European Commission, 2020).

The situation in the Republic of North Macedonia (RNM) is almost identical to the one in Europe. According to the State statistical office (Announcement on the structural business statistics, 2022), 99,7% from the total number of active enterprises belong to the group of micro, small and medium enterprises and are a very important indicator for the social development of the country. Nonetheless, the greatest potential can be observed in the group of small and medium enterprises, which appoints 42,1 % from the general employment and create 46,4 % from the total added value in the business sector.

Agricultural business (including the agricultural production and processing) is an important sector in the Macedonian economy. In accordance with the most recent information

of the State statistical office from the year 2021, the agricultural sector accounts for over 7,6% from the total Gross domestic product in the country, with over 12% in the total employment (Announcement on the structural business statistics, 2022).

However, although they play an important role in the global economy, SMEs face specific barriers and challenges in their operations. Over the course of the last few decades, numerous studies have been carried out by academics, researchers, political and business consultants, to analyze the business challenges faced by SMEs, concerning limited resources, difficult access to funds, continuous lack of human capital and slow adaptation to new technologies (Davis and Vladica, 2006). In addition, there are also numerous research on the factors which encourage SMEs to introduce information technology (Riemenschneider et al., 2003; Morgan et al., 2006;). Compared to the large enterprises, most small and medium enterprises encounter barriers during the introduction of information technology in their everyday work, because this matter most often entails an expensive initiative, risk and complex procedure which requires significant technical readiness of the enterprise (Pires and Aisbett, 2001; Chong et al., 2012).

Bearing in mind the importance of the information and communication technologies expansion, with particular emphasis on its importance for e-business and e-marketing, the research focus is directed towards understanding the factors that influence the introduction and acceptance of e-marketing by the enterprises.

### **Factors influencing the introduction of e-marketing**

There are numerous studies on the factors that encourage SMEs to introduce information and communication technology. Compared to larger corporations, most SMEs recognize certain barriers in the introduction of information technologies in daily business operations, such as, an initiative which entails excess costs, high risk, complex procedure, technical reluctance and access to customers (Riemenschneider et al., 2003; Morgan et al., 2006).

To describe the process of introducing e-marketing in SMEs, it is essential to carefully examine the concept of its introduction. To be able to answer the questions about how and why an enterprise decides to start using e-marketing, it is necessary to analyse the theories that deal with this issue, that is, the theories for the adoption of available technology. This research is based on the theory for technological, organizational and environmental framework (TOE). The TOE model isolates three groups of factors which influence the introduction or acceptance of new technology, organizational, technological, and environmental factors. Hence, TOE has received many positive reviews and is considered a well-established framework for studying this matter (Zhu, 2004; Salwani et al., 2009; Morteza et al., 2011; Ramdani et al., 2013; Sila, 2013). Authors also recognize the moment of dynamic integration offered by this framework, where changes in the enterprise are in fact simultaneously dependent not only on the individuals in the enterprise but also on the characteristics of the enterprise itself (Molla and Licker, 2005; Hameed et al. 2012). Also, the multidimensionality of TOE is considered a particular advantage over other models, consequently highlighting its better explanatory power compared to models covering only one dimension (Molla and Licker, 2005; Li and Xie, 2012).

Therefore, for the above reasons, the TOE framework has been chosen as the theoretical basis for the development of this research model. However, despite most positive evaluations of TOE, Ghobakhloo and Tang (2013) criticize the model for leaving out the individual characteristics of individuals in the enterprise, employees and managers, who nevertheless have an influential role in the process of adopting a new technology.

For this purpose, in this paper, an appropriate contribution to the literature is made by including the individual aspects in the theoretical framework for determining the internal and

external factors. In that direction, apart from taking into account the technological (technological infrastructure and technological readiness of staff and management), the organizational (organizational culture, management support and costs) and external factors (pressure from competition, pressure from buyers and pressure from suppliers), this research also covers the relevant factors from an individual context (perceived benefits from the application of e-marketing and simplicity in the application of e-marketing) that influence the introduction and acceptance of e-marketing by SMEs.

## **MATERIAL AND METHODS**

To analyse the internal and external factors that influence the introduction of e-business and e-marketing by SMEs in agribusiness in the RNM, a field survey was conducted to collect data from enterprises in the sector. For this purpose, a structured survey questionnaire is used. Several sources of data have been used for the preparation of the questionnaire: appropriate scientific literature and a theoretical framework that analyses the problems of the research (Gati, 2015), views of experts in the field of marketing, experts in the field of market analysis and experienced connoisseurs in Macedonian agricultural business.

The research was conducted on the territory of the RNM and covers small and medium enterprises within the framework of agricultural business. The sample was selected from the National classification of activities, from which 5 activity codes belonging to this group were selected:

- 46.2 Wholesale trade of agricultural raw materials and live animals
- 46.61 Wholesale trade of agricultural machinery, equipment and supplies
- 46.75 Wholesale trade of chemical products
- 47.76 Retail trade of flowers, plants, seeds, fertilizers, pet animals and pet food in specialized stores
- 47.78 Other retail trade of new goods in specialized stores

Data collection was carried out based on the database of the Central Registry of the RNM and a database in Excel format of the enterprises that belong to each of the listed activity codes, with full name, size of enterprise and contact phone number was provided. Furthermore, the database is filtered by enterprise size category, covering only the small and medium-sized enterprises that are of interest to this research. Also, the last-listed activity code, 47.78 Other retail trade of new goods in specialized stores, includes establishments that do not operate within agricultural business. In cooperation with Gauss Poll Ltd. - a consulting company to produce premium studies in socio-economic segments, all companies from the base were contacted by phone, and the final filtering was carried out, which resulted in the final version of the sample.

The survey questionnaire was designed on the basis of a comprehensive literature review (Gati, 2015) and previously conducted research within the framework of the International scientific committee of the Conference "European Agriculture and Food Value Chain: Dynamics and Innovations" in 2018, and was approved by experts in the field of marketing from the faculty of agricultural sciences and food – Skopje. The questionnaire consists of several questions that focus on the specific practice of small and medium-sized agricultural businesses, for the introduction or application of e-marketing. The structure of potential responses is easily measurable and should explain the factors under analysis, based on the TOE model. The questionnaire was further processed in Google Forms and distributed by email to small and medium enterprises by Gauss Poll Ltd.

The sample is composed of about 200 enterprises, to which the survey questionnaire was delivered. Seventy-eight responses were received. For the data processing, a python programming language was used.

Based on the purpose of the research, the necessity to determine the internal and external factors, and measure their influence on the degree of introduction of e-business and e-marketing by enterprises, the work method covers the determination of the degree of application of online marketing activities - internal and external factors (Organizational culture, Management support, Costs, Technological infrastructure, Technological competences, Perceived benefits, Ease of use, Competitors pressure, Customers pressure, Suppliers pressure, Internationalization) through correlation analysis and factor analysis for the problem of dimensionality reduction.

## **RESULTS AND DISCUSSION**

Certain recurring behaviours have been recorded in the responses of the respondents, which helped to understand the interpretation of the marketing function in the SME sector. First of all, starting from the basic answers, it can be concluded that the marketing function among small and medium-sized enterprises in the agricultural business in RNM is not a result of conscious preparation and planning. Furthermore, the analysis shows that sales and marketing are closely related and treated together, and the scope of interpretation of marketing is narrowed to customer acquisition and retention. The examination of the basic determinants that characterize online marketing leads to the conclusion that marketing practice operates under circumstances of limited financial and technological resources, strong managerial control and limited management support.

In connection with the online marketing tools that are applied and used, four categories have been examined, web page, online advertising (banners), online sales and social media. The most used online marketing tool is social media, namely:

- 47% of the respondents have their own web page,
- 50% of the respondents use online advertising (banners),
- 27% of the respondents use online sales,
- 98% of the respondents use social media.

Regarding the internal factors, according to the guidelines of the TOE model and in order to simplify the descriptive interpretation of the obtained results, the factors that influence the introduction and acceptance of e-marketing by SMEs are divided into three groups: technological (technological infrastructure and technological preparedness of staff and management), organizational (organizational culture, management support and costs) and individual context factors (perceived benefits of using e-marketing and ease of use e-marketing).

It is interesting to note that the more complex the examined marketing tool is, the greater the influence of the examined factors. Hence, a negative correlation occurs only with social media, that is, their application is influenced only by the technological infrastructure and simplicity of application.

The factors from the technological context are the most significant barrier in terms of introduction or application of e-marketing. Namely, a pronounced correlation was observed between the technological infrastructure and the technological readiness of the personnel and management with the introduction or the application of online sales, banners and website. Social media is the only e-marketing tool perceived not to require a specific technological infrastructure but requires a specific level of technological competence.

The organizational culture of the company in terms of inclination to change, the role of management and costs are often mentioned in the literature when interpreting the marketing

function as factors that have an influence in the introduction and application of e-marketing. This research supports the idea that the perception of the importance of marketing is typically defined by individuals in the company, the attitude of the management and the implementation costs. The analysis of personal responsibility in the marketing function helps to perceive the important role of SME management in decision-making and in the application of marketing tools, while the analysis of the financial background for the introduction of new technology, confirms the limited access to resources of SMEs.

When the problematics of digitalization are being analysed, along with the introduction and adaptation of new technologies the application simplicity is without doubt a crucial factor for analysis. Based on the answers of the examiners during this research, the ease of use has a direct effect on the application of the e-marketing tools, regardless of whether we are dealing with a more complex tool such as online sale, or the application of social media.

Table 1. Statistical value of the internal factors

Factor	Website			Online advertising			Online sales			Social media		
	$\mu$	$\sigma M$	p-value	$\mu$	$\sigma M$	p-value	$\mu$	$\sigma M$	p-value	$\mu$	$\sigma M$	p-value
Organization culture	0.092	0.192	0.002	0.251	0.192	0.257	0.310	1.92	0.018	-0.303	0.192	0.004
Management support	0.144	0.183	0.008	0.377	0.183	0.304	0.462	0.183	0.445	-0.310	0.183	0.001
Costs	0.300	0.175	0.003	0.360	0.175	0.562	0.330	0.175	0.522	-0.345	0.175	0.0002
Technological infrastructure	0.400	0.17	0.0025	0.450	0.17	0.0013	0.265	0.17	0.002	0.365	0.17	0.001
Technological readiness	0.170	0.132	0.0002	0.300	0.132	0.336	0.370	0.132	0.284	-0.240	0.132	0.004
Application simplicity	0.340	0.172	0.0017	0.440	0.172	0.006	0.270	0.172	0.001	0.150	0.172	0.013

On the other hand, when we consider the main role of the marketing itself, as a most emphasized factor often come the customers (orientation towards the customers). This is also confirmed by the individual analysis of the factor ‘perceived benefits from the application of e-marketing’. Namely, although only 52% of the respondents believe that they will have a certain usefulness from the introduction or application of e-marketing, 79% of them believe that the usefulness will be focused on the customers, particularly with an easier collection of data for customers’ needs and improvement of customer relationship. 73% of the respondents see a potential benefit in increasing sales and improving the company's reputation, while only 18% expect improved interaction with the stakeholders.

As for the external factors (pressure from competition, pressure from buyers and pressure from suppliers), the openness of small and medium-sized enterprises to innovative marketing tools is noticeably obvious in relation to buyers, that is, the customers. Namely, 41% of respondents answered that they use or would use e-marketing due to pressure from customers, which is significantly more than pressure from competition (1%) and pressure from associated parties (14%).

## CONCLUSIONS

The marketing activity of SMEs depends on various internal and external factors. The organizational culture, the role of the manager, the access to resources, the technological readiness of the enterprise and the individual aspect of the individuals in the enterprise have been highlighted. The following external factors, pressure from competition, pressure from buyers and pressure from stakeholders, have also been interpreted and characterized.

With the conducted research and the obtained results, a contribution has been made to the literature in the field of marketing and its application to SMEs in the agricultural business. In the literature so far, most often, the subject of research is SMEs in a general broader

context, and less often the focus is placed on the agricultural business. In RNM, comprehensive research of the factors which influence the introduction of e-business and e-marketing of SMEs in the agricultural complex has not been carried out up to this date, with an appropriate methodological classification of the companies that are part of the agricultural business. Therefore, this research has a significant contribution to the literature, both from empirical and methodological aspect.

Finally, the question of how much the use of Internet technologies for marketing purposes depends on the innovative nature and attitude of SMEs has become an important field of analysis, when in many cases the need to respond to external changes or the need for economic interest arises as a motive. However, necessity does not equal success. When applying new technologies and innovative solutions, there is no guarantee that these tools will be used correctly, or that they will replace the traditional tools, unless they are understood in a right way. Each enterprise is an entity unto itself, and that is why the unique approach to decision-making is important.

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