
STRATEGIC APPROACH IN IMPLEMENTATION OF E-BUSINESS ACTIVITIES IN MICRO AND SMALL ENTERPRISES

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Abstract:

The dominant use of information technology have a huge impact on today's transformation of many enterprises and imposes the need for changes in the business model. The changeable and unstable environment urges the business entities not only to constantly adjust but also to accept a strategic approach especially to their e-market performance. Businesses that use digital technologies and the Internet in their business activities are becoming more competitive and efficient, and time and space constraints are disappearing for them.

The paper emphasizes the need for a strategic approach to the new business environment, which will lead to greater implementation of e-business activities and models in the operation of small businesses. By using statistical analysis examines how knowledge of certain elements of strategic analysis will lead to more e-business activities, ie implementation of e-business models and applications.

The analysis in the paper emphasizes the correlation between the perception of the business entities regarding the conditions and the opportunities in e-environment and their internal factors, on one hand, and the implementation of the e-business applications and models in their business operations, on the other hand.

Key words: *strategic planning, business environment, e-market, e-business*

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Introduction

New developments in the enterprise environment create new problems and challenges, but also opportunities for finding solutions for them. In order for them to be efficient in their work, enterprises must respond immediately to changes in the environment, that is, to the changed demands and needs of their consumers, as well as to the activities of their competition. The proportion and pace of technology offer a great challenge for businesses. The external environment that includes, consumers, competitors, suppliers, technology, work force, education, legal, demographic, political, sociological and other factors (Shuklev and Drakulevski, 2001, p.81) can be stable, dynamic or turbulent (Friend and Zehle, 2004, p.31). Today it is especially important for the enterprise to be resilient, to be able to survive in a dynamic and turbulent environment, and to adjust to the changes taking place there.

With the development of the Internet, consumers are becoming ever more present and selective on the e-market, while the competition ever more strong. In such conditions, it is not just important to make a decision for entering that market, but it is especially important for that decision to be based on strategic concepts. It is clear that working conditions of enterprises are becoming increasingly more uncertain and dynamic with everyday technological innovations, and as they enter the e-market, they have to follow the steps of strategic planning (strategic analysis of the e-environment, strategic goals – vision, mission, goals, formulating of a strategy and implementation and control).

The new business environment provides great opportunities, both for large and small entities, regardless of the fact that small enterprises have limited materials and human resources. The results from the research on the strategic approach of small businesses will be presented within the framework of this paper, as well as recommendations for their action in the new environment. Namely, small businesses makesubstantial contributionstonational economies (Jutla et al., 2002, pp.139-164), main drivers of job creation (OECD, 2019, p.5), they are majorplayers in achieving sustainable growth and development of the national economies(Taylor and Murphy, 2004, pp.280-289). In today's business environment, small businesses face with very powerful forces that shape the competitive position and change the rules of the game.Digitalization is opening up new opportunities for young and small enterprises to innovate and flourish, asthey acquire capacity to use and combine emerging digital technologies to transform their business models and work practices. Potential implications for overall productivity and inclusive growth are large across all business sectors, including those traditionally dominated by small firms (OECD, 2019, p.7).

Like large enterprises, small enterprises also need to be flexible and react according to the conditions in the new environment. Nowadays, the Internet is making the strategy more necessary than ever before. The role of the strategy is in its contribution to achieving competitive advantage of the enterprise (Anthony, 2011, p.4).

Business entities for success at e-market need to develop a strategy with a clear focus. Considering the fact that today business entities operate in dynamic and unpredictable environment it is necessary monitoring and evaluation of e-business strategy in order to adjust to the same and at the same time to achieve the goals of the business entity. The essence of a strategy lies in choosing activities in a different way, or in performing activities in a different way from those of the rivals (Porter, 2009, p.43) or series of decisions and actions that are taken to achieve stated aims and objectives (Combe, 2006, p.213) and strategy is an integrated and coordinated set of obligations and actions in the direction of utilizing the basic competencies of business enterprises and gaining competitive advantages (Michae et al. 2008, p.4).

As a result of the Internet and the Web are created a number of powerful new software applications that enable certain traditional activities to be performed electronically, such as e-mail, search engines, intelligent tools, online forums, streaming media, cookies, web 2.0 features and other services

(Laudon and Traver, 2010, pp.172-181). All of these software applications are relieving people's life and simplify and speed up business. With the development of Internet the enterprises have more strategic alternatives for the market, but choosing them should rely on good alignment of the strategic capabilities of the business entity and its environment. New challenges in the environment of the enterprises impose the need for building a strategy with a clear focus, i.e. they should have the following characteristics (Porter, 2009, p.130):

- a strong Internet technology and its knowledge,
- building distinctive strategies with a clear focus,
- accent and focus on creating value for customers,
- distinctive ways of performing physical activities and making the property that is not on the Internet and
- deep knowledge of the business and establishing their own skills, communications and information.

The traditional view and planning system within enterprises nowadays is becoming inefficient and outdated in terms of improving business performance. Today, leading businesses are concentrating on the following three key areas (Elkin, 2007, p.2):

- consumers – how to ensure that consumer needs are met;
- competitors – how to achieve and maintain competitive advantage and
- company – how to continue and build company forces.

According Jantavongso and K. Y. R. Li (2002, p.443) their literature surveys indicate that businesses that succeed in this new economy undertake careful planning in the following seven key factors: management commitment - having a clear focus what to achieve; IT infrastructure availability; web pages is a key factor in determining the success of e-business; Web Content; e-business systems; effective marketing and customer service.

However, in order to achieve success in these areas, it is necessary to get to know and apply the entire strategic planning process when entering the new e-environment.

Materials and Methods

With the purpose of gaining knowledge on the conditions and opportunities for conducting e-business in the Republic of North Macedonia, and the strategic considerations of micro and small enterprises for implementation of e-business solutions, desk and field research was carried out. The desk research identified certain conditions and opportunities of enterprises in the environment of the Republic of North Macedonia, through analyses of data on relevant websites, expert publications, reports, laws and so on. The field research provided information on the implementation of e- business applications and models in enterprises in the country, as well as their strategic approach, more specifically, knowledge on e-environment. The field research on the enterprises was conducted through a questionnaire structured in the following four groups of questions: general data on the business entity, knowledge of the business entity about consumer behaviour on the Internet, conditions for conducting e-business (e-commerce) in Republic of Macedonia, and e-business strategic thinking (strategic approach) of the enterprises, and included 140 enterprises. The data obtained from the survey was processed with a statistical tool from the SPSS software package with the intention of reviewing and determining the need of the business entities to gain insight in the strategic approach and application of the strategic analysis for more efficient implementation of e-business activities in the initial steps of entering the e-market. Following the processed data from the research, a model was proposed for the

strategic approach in the new environment, with the purpose of greater implementation of e-business activities in small and medium enterprises, which was also examined through statistical analysis.

Results and discussion

The results of the research confirm that many obstacles to conducting e-business that previously existed in the Macedonian online space, have gradually began to be eliminated. The liberalization of the telecommunication sector and the reduction of prices for Internet use, the development of broadband internet, the development of e-services of banks, or internet banking and their e-commerce service, the adoption of a legal regulation related to e-business and internet security, ratified international agreements for countering cybercrime, the development of services of digital marketing agencies, the widespread acceptance of the Internet by the citizens, the development of express mail, separate programs and government projects and similar, gradually assist in the development of e-commerce, namely, e-business in Republic of North Macedonia. However, it is necessary to take additional measures and activities for improving the e-business climate, that is, for completely removing the obstacles for conducting e-business. Data from the State Statistical Office of the Republic of North Macedonia (2018, p.4) indicates that almost all of the companies (92.4%) in the country have Internet access. Regarding the e-commerce only 5.7% of the enterprises received e-sales orders via computer networks and 4.4% of the enterprises received orders of products and services via web -sales. The growth of electronic commerce is still not significant enough, given the fact that almost all of the companies in the country use the Internet.

The research outlines (Angeloska-Dichovska & Petkovska-Mirchevska, 2016, p.36) the following five challenges to conducting e-business (e-commerce) in Republic of North Macedonia: concern in regards to privacy and security (46%), insufficient information on starting or implementing e-business (43,4%), consumers not using the technology (35%), finding staff with appropriate experience in e-commerce (29%) and the need of organizational changes (28%).

Research on the Republic of North Macedonia confirms that most bank institutions offer the service electronic commerce to legal entities, thus offering their clients intermediation in the payment in electronic sale of products and services. On the other hand, 60% of micro and small business entities have no knowledge of the e-commerce services of the bank institutions, even though they are a significant partner in their everyday work.

In the country, there are more than ten laws that are applied, which directly or indirectly regulate certain areas of information society, more specifically, of electronic business and electronic commerce. All these laws are an important element in the safe and secure e-business environment of business entities. Furthermore, the country's ratified international agreements on information security increase the security in conducting e-business. However, despite the wide legal regulation that regulates the area related to e-business, in fact, micro (64%) and small (75%) companies are not familiar with it. Digital internet agencies play an important role in the professional presentation of enterprises across the online space. They offer various services related to online working of enterprises as follows: developing and maintaining websites, strategy for performance of social medias, managing social media, creating contents from a marketing perspective, creating contents on blogs, consultation services for internet marketing, optimization of search engines and etc. Although lately there has been a trend of accepting services of digital agencies also by small business entities, still, over 60% of small business entities have stated that they are not familiar with the services of digital marketing agencies. In the previous period, Republic of Macedonia was lacking projects and initiatives directly aimed at development of electronic commerce, especially at electronic business. Some of the government's initiatives that were focused on development of information society indirectly contributed to development of e-business in the country. However, despite the extensive

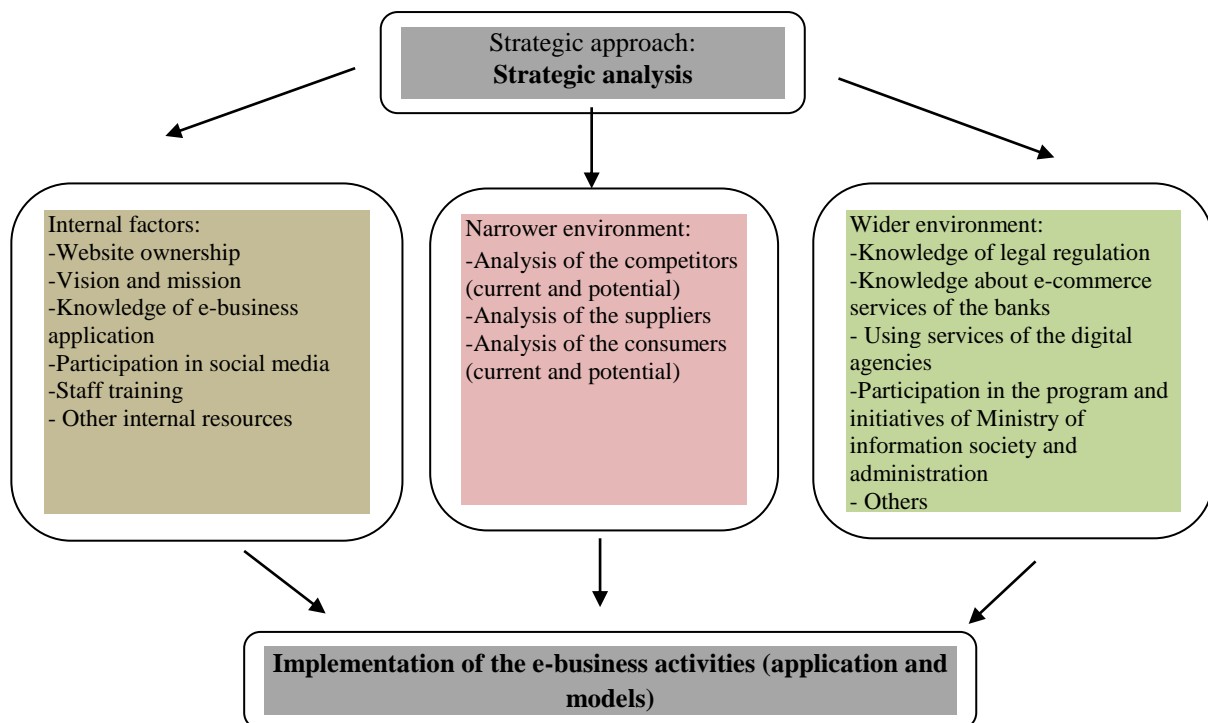
promotion of numerous initiatives (example “100 electronic shops and 100 Macedonian entrepreneurs” and others), over 50% of small businesses are not familiar with the initiative of the Ministry of Information Society and Administration for development of e-commerce (e-business) in the country.

From the analysed data on the strategic approach of the business entities, it can be concluded that Macedonian business entities do have certain elements of a strategic approach in their business operations in regards to the e-environment in the country, but that a complete approach is lacking towards the narrower and broader external and internal e-environment.

Half of the surveyed enterprises (about 51%) do not have elements of e-business (e-commerce) incorporated in their mission and vision. Also, the analyses confirm that small enterprises are facing the problem of insufficient information on the business environment and about the behaviour of their consumers on the internet, as well as the opportunities and conditions for entering the e-market, i.e., for introducing electronic business. The analysis confirms that more than half of the surveyed micro and small enterprises do not have a website.

Based on the received and analysed data from the conducted surveys, as well as the theoretical framework for implementing a strategic analysis, a model emerged for a strategic approach in small and medium enterprises in the Republic of North Macedonia for the necessary steps that need to be made for greater and more efficient implementation of e-business applications and models in the initial steps of entering the e-market. The schematic display of the model of strategic approach is given in Picture 1.

Picture 1 Model of strategic approach



Source: Made according of the analysis from ouw research

By using the statistical tool from the SPSS software package, and the results received from the field research, the need was confirmed for business entities to learn about the strategic approach through a strategic analysis (application of the above-mentioned model in the first phases of applying e-business

applications), because in this way, there is greater implementation of e-business applications and models in their working.

By using the multistage standard regression statistical technique, the interrelationship between the implementation of e-business applications and models and separate predictors of the above-mentioned strategic approach model was determined. The following two predictors or variables from each group of environment were analyzed: knowledge about the legal regulation related to e-business (e-commerce), knowledge about e-commerce services of banks, incorporated elements of e-business in the vision and mission of the company, website ownership, knowledge about e-business activities of competitors and knowledge about the online presence of suppliers. Furthermore, the same technique was used to examine which of the previously stated variables is the best predictor.

The use of the multistage standard regression statistical technique is based on several assumptions. At the beginning, all assumption on which this technique is based on are tested, that is, the relationship between the variables is checked.

According to Tabachnik and Fidell (Pallant2009, p.151), the required sample size that takes into consideration the number of independent variables, whose influence is tested on the dependent variable, is calculated according to the following formula: $N > 50 + 8 * m$, where N is the sample size, while m is the number of independent samples.

Six independent variables have been included in the following analysis, and according to Tabachnik and Fidell, N, or the sample size, should be greater than 98, more specifically, more than 98 business entities need to be included in the sample. Our research included 140 business entities, hence the condition for the sample size has been fulfilled. Next, the multicollinearity, singularity, atypical points, normal distribution, linearity and homogeneity of the dispersion of variables were checked. Table 1 shows the correlation between the variables of the strategic approach model.

Table 1 Correlation between variables of the strategic approach Model

		1	2	3	4	5	6	7
Pearson Correlation	1	1.000	.245	.217	.383	.269	.356	.226
	2	.245	1.000	.400	.319	.079	.203	.042
	3	.217	.400	1.000	.188	.027	.119	.110
	4	.383	.319	.188	1.000	.160	.188	.191
	5	.269	.079	.027	.160	1.000	.138	.233
	6	.356	.203	.119	.188	.138	1.000	.183
	7	.226	.042	.110	.191	.233	.183	1.000
Sig. (1-tailed)	1	.	.002	.005	.000	.001	.000	.004
	2	.002	.	.000	.000	.176	.008	.313
	3	.005	.000	.	.013	.374	.080	.098
	4	.000	.000	.013	.	.030	.013	.012
	5	.001	.176	.374	.030	.	.051	.003
	6	.000	.008	.080	.013	.051	.	.015
	7	.004	.313	.098	.012	.003	.015	.

From the given table it can be seen that between the dependent and independent variables there is a correlation (Pearson Correlation). A medium correlation is evident between the implementation of e-

business applications and models and the incorporation of e-business elements in the vision and mission of the business entity (0,38), and between the implementation of e-business applications and models and knowledge about e-business activities of competitors (0,36). Also, there is correlation of a smaller scale between the implementation of e-business applications and models and the other variables. A separate analysis determined that there is no multicollinearity.

In the text below, the graphic display of the distribution (Normal Probability Plot (P-P)) of the strategic approach model is given in Figure 1. In the given graph, the points are distributed in an approximately straight diagonal line from the bottom left to the upper right corner, which indicates that there are no great deviations from the normality.

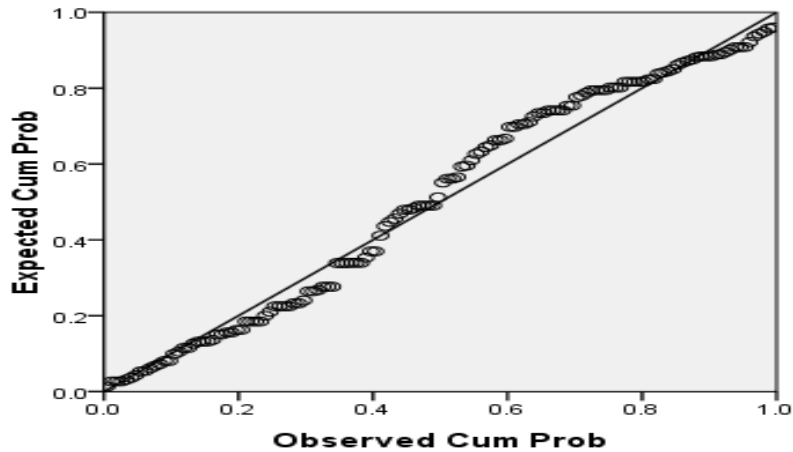


Figure 1 Distributed of the strategic approach model

Figure 2 gives a display of the scatter plot of the strategic approach model. In the given figure, the points are diagonally distributed and most of the points are positioned around the zero, from which it can be concluded that there are no atypical points. According to Tabachnik and Fidell, there are atypical points when the points on the figure are located on a position greater than 3.3 or -3.3.

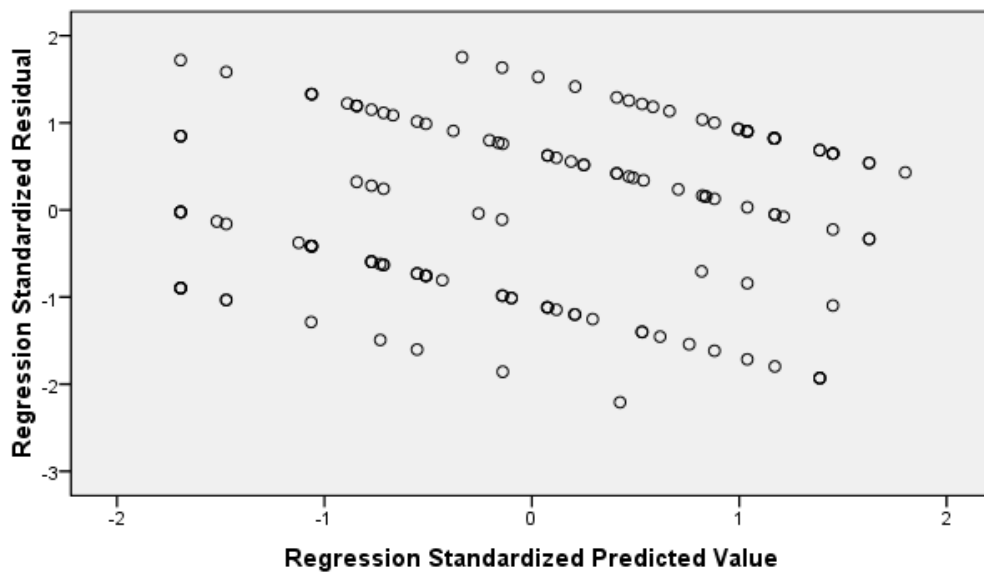


Figure 2 Scatter plot of the strategic approach model

Dependent variable: Implementation of e-business applications and models

Once the assumptions for a multistage standard regression are determined, next is the evaluation of the model. Table 2 gives a summary display of the strategic approach model, where the coefficient of determination r^2 (RSquare) can be observed. This coefficient r^2 shows how much of the dispersion of the dependent variable (implementation of e-business applications and models) is explained by the model that includes the following variables: knowledge about the legal regulation related to e-business (e-commerce), knowledge about e-commerce services of banks, incorporated elements of e-business in the vision and mission of the business entity, website ownership, knowledge about e-business activities of competitors and knowledge about the online presence of suppliers.

Table 2 Summary display of the strategic approach model

Model	R	RSquare	Adjusted R Square	Std.Error of the Estimate
1	,534	,286	,253	1.14644

The summary review shows that the coefficient of determination is $r^2 = ,286$. This data shows that the strategic approach model explains 28,6% of the implementation of e-business applications and models. Right next to RSquare in the table, is the column titled Adjusted RSquare, which is corrected r^2 . Actually, r^2 is an optimistic estimation, hence the indicator Adjusted RSquare corrects that value and gives a better estimation. In this analysis, the Adjusted RSquare is 0,253, which shows that the strategic approach model (analysed variables from the model) supports 25,3% of the implementation of e-business applications and models. With the purpose of checking the statistical significance of this indicator, the ANOVA test is used for determining the statistical significance. The statistical significance is Sig. = ,000, namely, it indicates that $p < 0,0005$, which confirms that this data is statistically significant (Table 3).

Table 3 ANOVA test of the strategic approach Model

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.882	6	11.647	8.862	.000 ^a
	Residual	174.804	133	1.314		
	Total	244.686	139			

a. Predictors: knowledge about the legal regulation related to e-business (e-commerce), knowledge about e-commerce services of banks, incorporated elements of e-business in the vision and mission of the company, website ownership, knowledge about e-business activities of competitors and knowledge about the online presence of suppliers

b. Depend Variable: implementation of e-business activities (applications and models)

Table 4 shows the values of the individual impact of the variables of the strategic approach model. From the Beta column in the section Standardised Coefficients it can be seen how much each independent variable in the model contributes to the prediction of the dependent variable.

Table 4 Values of the coefficients for the independent variables in the strategic approach model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.326	.531		-.613	.541	-1.377	.725
	Knowledge about the legal regulation related to e-business (e-commerce)	.156	.239	.055	.651	.516	-.318	.630
	Knowledge about e-commerce services of banks	.293	.228	.103	1.283	.202	-.158	.744
	Incorporated elements of e-business in the vision and mission of the company	.683	.211	.258	3.241	.002	.266	1.099
	Website ownership	.446	.202	.168	2.207	.029	.046	.846
	Knowledge about e-business activities of competitors	.652	.203	.246	3.208	.002	.250	1.055
	Knowledge about the online presence of suppliers	.124	.121	.079	1.023	.308	-.116	.363

Of a total of six independent variables included in the model, the variable incorporating elements of e-business in the vision and mission of the business entity gives the greatest individual contribution (0,258) to explaining the initial implementation of e-business applications and models. Knowledge about e-business activities of competitors (0,246) and website ownership (0,168) also make statistical significant individual contribution.

From the analysis that has been conducted by using the multistage standard regression statistical technique, it can be concluded that the given strategic approach model for micro and small enterprises in the initial steps of entering the e-market, which includes knowledge about the legal regulation related to e-business (e-commerce), knowledge about e-commerce services of banks, incorporated elements of e-business in the vision and mission of the business entity, website ownership, knowledge about e-business activities of competitors and knowledge about the online presence of suppliers, supports 25,3% of the dispersion of the implementation of e-business applications and models.

Conclusions

Working conditions of enterprises are becoming increasingly more uncertain and dynamic with everyday technological innovations, and even more complex for smaller businesses that have limited material and human resources. Enterprises that use digital technologies and the Internet in their business activities, become more competitive and more efficient, while time and space limitations disappear for them. With the Internet, our everyday way of life changes, the needs and behaviours of the modern consumer change, and all this imposes changes to the traditional business processes as well. The Internet is becoming a very important business tool for sharing information, buying, selling, communication and cooperation.

The conclusion that has emerged from the results of the research is that Macedonian micro and small enterprises are not sufficiently familiar with the conditions and opportunities of conducting e-business

(e-commerce) in the country, that is, more than 60% of micro and small business entities do not have knowledge about e-commerce services of banking institutions, there is little information on legal regulations related to e-business, there is little knowledge among them about services that digital marketing agencies offer (60%), as well as the possibilities for developing e-business activities offered by national programs and projects in the country. For the purpose of accelerating the process of introducing e-business in the country, it is necessary to take direct measures to eliminate the existing barriers for conducting e-business (e-commerce).

The statistical analysis determined the interrelationship between the implementation of e-business applications and models and separate variables of the strategic approach model, namely, the variable incorporating e-business elements into the vision and mission of the business subject, gives the most individual contribution to the explanation of the initial implementation of e-business applications and models in micro and small enterprises. Also, knowledge about e-business activities of competitors and website ownership have statistically significant and individual contribution. These elements need to be taken into consideration in the first steps when entering the e-market.

In order to increase the implementation of e-business applications and models in enterprises, especially in micro and small enterprises, it is necessary to follow the steps of strategic planning when entering the e-market, on which base is the strategic analysis of e-environment.

The statistical analysis points to the conclusion that greater knowledge of the factors from the narrower and wider e-environment and having appropriate internal elements and resources lead to a strategic decision on e-business, that is, it will lead to greater implementation of e-business applications and models in Macedonian enterprises. Hence, the need for a strategic approach of micro and small business entities towards the e-environment and continuous monitoring of changes in the competitive environment, with the purpose of greater implementation of e-business solutions.

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