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AUDITING AND CONTROLLING AS A TOOL FOR SME MARKETING RISK MANAGEMENT

Abstract. *The current hyper-competitive environment, rapid marketing tools, and modern techniques provide many opportunities for small and medium-sized businesses. Such opportunities could bring much in the way of rewards both for the individual companies and the wider economy. However, there are many threats associated with these business environments which cannot be overlooked. Small and medium-sized businesses are a significant stabilizing economic power within the European Union. Therefore, it is not surprising that small and medium-sized businesses competitiveness and their long-term stability are vital factors for European cohesion and development. This research aims to analyze risk management within small and medium-sized businesses, identify critical risk factors, and develop risk management, which could be applied to small and medium-sized businesses. The authors analyzed risk management's consequences and explained the variables as follows: ROA, Auditing, Controlling Management, Marketing, and Corporate Culture. Based on the research findings, the goal was to increase their interaction effectiveness, focusing on small and medium-sized businesses long-term stability and competitiveness. For achieving these aims, the paper provides two research questions and designs three hypotheses. This research was conducted from 2017 to 2020 on sample n = 432 EU small and medium-sized businesses. The reached data were analyzed by statistical method and experimental «in practice» testing. Based on the result and its experimental testing, a marketing risk management model was designed, tested, and verified using practical methods. This model could be used for the identification and avoidance of potential risks when developing a marketing strategy. The findings reached should be used to advance research and similarly for practical use within the business sphere.*

Keywords: risk management, auditing, controlling, marketing, SME, corporate culture.

Introduction. Small and medium-sized businesses (SMEs) are the backbone of the economy in today's world, especially in the economic environment, as de Araújo Lima et al. (2020) mentioned. Thus, SMEs are influenced by many opportunities, threats, and risks. Risk management is an important part of SMEs' modern management (Hudakova et al., 2018). But what threats should risk management focus on? Corporate culture (Abdul-Halim et al., 2018) and corporate marketing (Bauer and Gati, 2019) are among the primary components of business processes. If the company deals with corporate culture and marketing plans, it manages its own future development and threats. It is possible to apply auditing according to Furtuna and Ciucioi (2019) and controlling according to Laval (2018) to oversee these activities continually. Auditing and controlling are very tightly connected with the risk processes, on the one hand, and with the risk management, on the other hand. The validation of the risk management model, which uses audit and controlling to oversee corporate culture and corporate marketing threats, is what this paper is focused on. Risk management (Virglerova, 2018) could efficiently validate other business processes effectively, especially in the Industry 4.0 environment. It is important to address this issue, develop other business theories, and open professional discussions in line with the latest international knowledge.

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Literature Review. The literary review reflects the current state of the analyzed topic. Besides, this part represents the author's perception of the selected terms. Resources, analysis, and content analysis are implemented. All theories are put in the context of the SME environment of Industry 4.0, as mentioned by Kosacka-Olejnik and Pitakaso (2019) and by Garbellano and Da Veiga (2019). This paper aims to focus on modern innovations (O'Dwyer et al., 2009), which are risk management necessities. SMEs are therefore primarily referred to as an important part of the economy (Belas and Sopkova, 2016; Svec and Madlenak, 2017). Subsequently, the threats that occur in this area are defined. Finally, tools to eliminate these threats are presented. Several individual processes need to be continuously focused.

The threats mentioned above, connected with the SME area are risks, which appeared in this modern and quickly developing environment. The risk is primarily perceived according to the definition of Gupta (2016) as a variability that could be quantified in terms of probabilities. Dvorsky et al. (2019) directly define the risk as exposure to a potential loss, and he adds that all companies are exposed to some form of the risk. The level and form of the risk exposure differ by industries and by companies within an industry. Figure 1 shows many risk types could be divided according to the place of occurrence (Hudakova et al., 2017). An SME's approach to risk is also dependent on its attitude to risk management (MikuSova, 2017; Kupec, 2018).

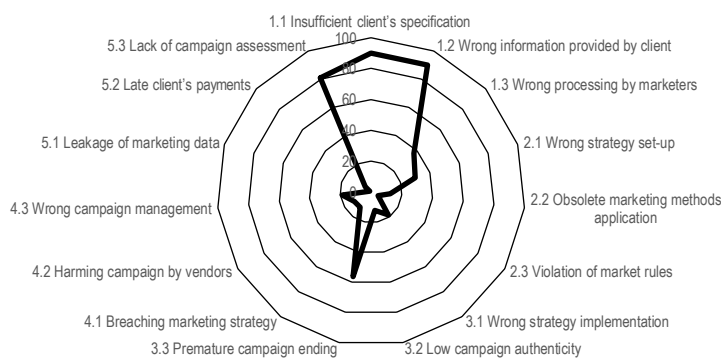


Figure 1. Marketing Risk

Sources: developed by the authors on the basis of (Kupec, 2018).

For risk management, modern approaches could be effectively applied. These approaches include audit and control. An audit is currently perceived as a consulting service that helps SME management in dealing with risky processes. In line with the theory of Xhani et al. (2019), Furtuna and Ciucioi (2019), or Virglerova et al. (2020). The role of audit has steadily increased, becoming one of the strategic pillars of today's companies. In the current context, where risk management is increasing, auditors are proactive and responsible for the SME environment's threats (Belas et al., 2020). Narayanaswamy et al. (2019) confirmed this, who added that the audit is an important element in the corporate governance framework. These theories are verified by Kupec (2018) as well.

A no less important approach for risk management is controlling. The concept of controlling started from an accounting approach. It was defined as a process through which managers should allocate efficiently and effectively the available resources to achieve the organizational objectives (Bunget and Brinduse, 2019; Mura et al., 2016). According to the current understanding in the business sources and

by outlining three different perspectives, the meaning of controlling is perceived as being (1) the controller's mission statement, (2) the controlling process model, and (3) the role of the concept in controlling (Laval, 2018). That is also a methodological approach by Písar and Kupec (2019) or by Písar and Bilkova (2019), which is used in this paper.

There are several risky processes in the SME environment. It is possible to divide them into soft processes and hard processes. In this paper, the soft processes would be solved. One of the primary ones is the corporate culture (Liu, 2016). Corporate culture is the most valuable part of SME management (Guiso et al., 2015; Olsovska et al., 2016). According to Senkova (2016), this term represents a system of attitudes that create the way of performing work. Liao (2018) summarizes corporate culture as a set of assumptions formed by firms responding to the whole environment. As the result of the corporate culture, Fiordelisi and Ricci (2014) see the stronger firm performance, which has been accepted by theory and business (Eisend et al., 2016; Uslu et al., 2020).

The next attribute of the SME soft processes is marketing. The development process in marketing has been shaped in the last four decades (Ghods, 2019). Marketing has become an interdisciplinary area. It uses knowledge of sociology, economics, statistics, etc. Nowadays, marketing is not a matter of one department but the whole company's matter (Karlíček et al., 2018; Mura, 2020). The technological and digital revolutions experienced over recent decades have fundamentally transformed marketing practice. At the same time, the world's many economic, social, and political problems could benefit from proactive, purpose-driven marketing thought (Moorman, 2019), which is confirmed by Petru et al. (2019) from the holistic and innovative point of view.

Methodology and research methods. The research data was collected from 2017 to 2020 from EU SMEs. The primary sample for research was taken by randomized selection from the University of Finance and Administration D-base $n=3972$. These SMEs were contacted. In turn, this study involves all SMEs' complete research data. The final sample ($n=432$) was used for model construction. Research findings are to answer the research questions and hypotheses concerning the following aims.

The research aims to analyze risk management in SMEs, identify critical risk factors, and develop risk management applications for SMEs.

The secondary aim is to analyze consequences between risk management and explain variables (ROA, Auditing, Controlling Management, Marketing, and Corporate Culture) based on research findings increase the effectivity of their interaction with a focus on SME long-term stability and competitiveness.

Q1 Are auditing and controlling management system tools compatible with current standards for marketing risk management? If yes, what is their role in marketing risk management, and how could they support SMEs' stability and competitiveness in the long term?

H1 – Auditing is a managerial, analytical tool that should be used for marketing risk management and decrease risk's negative impact.

H2 – The controlling management system should be used for continuous risk quantification, managing and decreasing their influence on SME performance and stability.

Q2 What is the role of corporate culture on marketing risk management?

H3 – corporate culture creates a necessary supporting environment, which connects the Controlling management system and Auditing and accelerates its performance and flexibility.

According to Barbu and Isaic-Maniu (2011), data was collected using PAPI (Paper Assisted Personal Interviewing) based on the company's questioner and depth of personal research. The research was based on personal interviews in the company. The evaluation data was compounded from interviews through SMEs (TOP management, middle management, and blue collars). The research followed the research process based on the studies' principle (Gavora, 2010; Giddens, 2013). Additionally, for the concluded analysis result compared to its impact on SMEs stability and performance, the basic financial analysis (actual Balance sheets and Profit and Loss statements) was used. For the sociological research

section, the Licker 5-point scale was used. Final processing of data was created using IBM SPSS ver.25 and Microsoft excel.

Marketing risk management – assessment scale: 0 = no, 1 = sporadic, no feedback, 2 = moderate, 3 = high level – the company intensively works on risk management, 4 = optimized level – the company uses marketing risk management analysis, continuous improvement.

Auditing – assessment scale: 0 = missing or inadequate, 1 = low level, 2 = moderate level, 3 = exceptional level, including automatic drivers for continuous improvement.

Controlling management system – assessment scale: 0 = missing or inadequate, 1 = low level, 2 = moderate level, 3 = exceptional level, including automatic drivers for continuous improvement.

Corporate culture – assessment scale: 0 = not exist, 1 = low level without development, 2 = medium level, corporate culture exists, there is no mechanism for its development, 3 = Corporate culture on a high level which is respecting modern trends and high standards, 4 = optimized level - the company uses high-level of corporate culture, and there is a process that continuously stimulates the company in corporate culture development.

Marketing – assessment scale: 0 = missing or inadequate, 1 = low level, 2 = moderate level, 3 = exceptional level, including automatic continuous improvement functionality.

$$ROA = \frac{EBIT}{Assets} \quad (1)$$

The first step of data analysis was testing its reliability. The Cronbach alpha method was chosen for reliability data testing. According to Cronbach (1951), Cronbach's alpha takes values in the interval of 0-1. A small Cronbach's alpha value indicates the low reliability of the analyzed data. Usually, a value of 0.7 or higher is interpreted as the high reliability of the data sample examined. Cronbach's alpha is given by

$$a = \frac{k}{k-1} \left(1 - \frac{\sum_{j=1}^k var(Y_j)}{var(Y)} \right) \quad (2)$$

Other authors such as (Kramer et al., 2018; Wijazatunga, 2016) are verifying that Cronbach alpha computing is an equal method for sociological research data verifying. Based on their findings and recommendations, the data reliability test was designed. For the Cronbach's alpha calculation, the statistical program IBM SPSS ver. 25 was be used.

One important research task was to determine the relationship between researched variables. According to Tsintsadze et al. (2018), the Pearson correlation coefficient is an appropriate method for this research approach. The Pearson correlation coefficient value is on interval 0-1 (to 0.20 the correlation is negligible, 0.20-0.40 is not a very close correlation, 0.40-0.70 is a moderately tight correlation; 0.70-0.90 is a very close correlation and more than 0.90 is an extremely close correlation). As a minimum value of the Pearson coefficient test would be set on 0.4 value. If the value is 0.7 – 0.8, the variable could be identified as a key factor. If some variables have a value of the Pearson correlation coefficient higher than 0.8, those variables should be excluded because of multicollinearity, which could cause degradation of results. Pearson correlation coefficient:

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}} \quad (3)$$

As the final step of the model construction for dependent variable Strategic management, the stepwise method would be used. Model computing would be according to the following formula.

$$b_{j,std} = b_j \cdot \left(\frac{s_{xj}}{s_y} \right) \tag{4}$$

where S_y and S_{xj} are the standard deviations for the dependent variable and the corresponding j th independent variable. For computing the model, the IBM SPSS ver. 25 would be used. For closer detail of the process, Stepwise analysis follow Darlington and Hayes (2017).

This study provided the dependent variable model, marketing risk management, based on the results' statistical analysis. If this operation is successful and the model passes the significance test on a minimum 5%, the analysis results and model could be tested by experimental testing. This testing process would contain the finding and model implementation in SME. Besides, the research would be repeated in 6-12 months. The resulting data would be compared with the previous one with a focus on the differences.

Results. The first analysis step was the computing of Pearson's correlation analysis to determine if there was a linear dependency between researched variables, the value of which would pass given test parameters. Table 1 displays the results.

Table 1. Variables correlations analysis

		Marketing risk management	Marketing	ROA	Controlling management	Auditing	Corporate culture
Marketing risk management	Pearson Correlation	1	0.676**	0.473**	0.789**	0.791**	0.664**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	432	432	432	432	432	432
Marketing	Pearson Correlation	0.676**	1	0.282**	0.626**	0.578**	0.543**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	432	432	432	432	432	432
ROA	Pearson Correlation	0.473**	0.282**	1	0.475**	0.384**	0.466**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	432	432	432	432	432	432
Controlling management	Pearson Correlation	0.789**	0.626**	0.475**	1	0.693**	0.697**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	432	432	432	432	432	432
Auditing	Pearson Correlation	0.791**	0.578**	0.384**	0.693**	1	0.612**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	432	432	432	432	432	432
Corporate culture	Pearson Correlation	0.664**	0.543**	0.466**	0.697**	0.612**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	432	432	432	432	432	432

** Correlation is significant at the 0.01 level (2-tailed).

Sources: developed by the authors.

Based on data analysis results, all analyzed variables passed the significance test at 1% level. Besides, it was also proven that there is an important linear dependency between researched variables that are passed by the research test given values. If no variable's linear relationship was higher than 0.8, then multicollinearity was not detected. The next research step was the model construction for the dependent variable Marketing risk management. Table 2 shows the results and model.

Table 2. Dependent Variable: Marketing risk management model construction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.078	0.106		10.142	0.000
	Marketing	0.676	0.036	0.676	19.028	0.000
2	(Constant)	0.281	0.132		2.134	0.033
	Marketing	0.589	0.034	0.590	17.345	0.000
3	ROA	0.423	0.047	0.307	9.023	0.000
	(Constant)	-0.234	0.098		-2.396	0.017
4	Marketing	0.207	0.031	0.207	6.698	0.000
	ROA	0.142	0.037	0.103	3.856	0.000
5	Auditing	0.536	0.045	0.401	11.934	0.000
	Controlling management	0.453	0.050	0.332	9.020	0.000
6	(Constant)	-0.207	0.099		-2.092	0.037
	Marketing	0.200	0.031	0.200	6.392	0.000
7	ROA	0.129	0.037	0.093	3.436	0.001
	Auditing	0.521	0.046	0.390	11.399	0.000
8	Controlling management	0.421	0.054	0.309	7.861	0.000
	Corporate culture	0.077	0.046	0.058	1.670	0.006

Sources: developed by the authors.

$$\text{Marketing risk management} = -0.207 \times (\text{Constant}) + 0.200 \times \text{Marketing} + 0.129 \times \text{ROA} + 0.521 \times \text{Auditing} + 0.421 \times \text{Controlling management} + 0.077 \times \text{Corporate culture} \quad (5)$$

The reached model passed the significance test on the 1% level. Table 3 provides the model summary.

Table 3. Dependent Variable: Marketing risk management model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.676 ^a	0.457	0.456	1.055	0.457	362.064	1	430	0.000
2	0.737 ^b	0.544	0.542	0.968	0.087	81.419	1	429	0.000
3	0.876 ^c	0.768	0.766	0.692	0.224	206.161	2	427	0.000
4	0.877^d	0.769	0.767	0.691	0.002	2.787	1	426	0.006

a. Predictors: (Constant), Marketing; b. Predictors: (Constant), Marketing, ROA; c. Predictors: (Constant), Marketing, ROA, Internal audit, Controlling management; d. Predictors: (Constant), Marketing, ROA, Auditing, Controlling management, Corporate culture

Sources: developed by the authors.

The compiled model of n=5 explanatory variables to the dependent variable Marketing risk management - multiple selection coefficient R² = 0.877^d shows 76.9% variability of the dependent variable explained by the chosen regression plane. The multiple sample correlation coefficient R=0.877^d is close

to 1, at the level of the direct (positive) linear dependence of the explained variable on all five selected explanatory variables taken together.

The research questions should be answered and hypotheses evaluated based on data analysis results, experimental testing, and other findings.

H1 – Auditing is a managerial, analytical tool that should be used for marketing risk management and decrease risk's negative impact.

During research based on data analysis and model construction, it was found that Auditing (0.791 of Pearson correlation coefficient) and Controlling management (0.789 of Pearson correlation coefficient) have a close linear relationship with variable Marketing risk management. The values of linear dependency of variables researched should be declared as a close relationship. The computing of a model for dependent variable Marketing risk management shows that auditing has high strength (0.521 value) and Controlling management (0.421 value). Based on these finding, the marketing risk management process was implemented in an experimental tested SME n=38 in 6-12 months range (Figure 2).

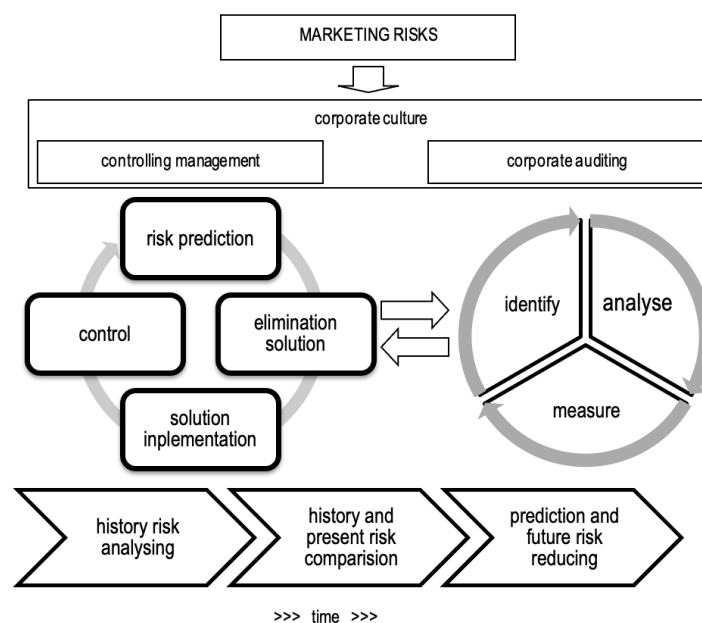


Figure 2. Auditing - Controlling marketing risk management

Sources: developed by the authors.

All of the tested SMEs stated that marketing risk management is more flexible, while marketing risk management's efficiency increased. The requested respondents, n=76 mostly (93%), described the new process of marketing risk management as simple and applicable. There was also one more impressive finding. Thus, audit and controlling were seen (95%) as tools focused on SMEs' future and supporting company competitiveness. That is in line with the theories by Xhani et al. (2019), Fortuna and Ciucioi (2019,) and Narayanaswamy et al. (2019). The hypotheses H1 should be declared as proven.

H2 – The controlling management system should be used for continuously marketing risk quantification, managing and decreasing their influence on SME performance and stability.

Based on findings reached in the research process and their experimental testing, it was found that one of the main controlling functions is to analyze deviations of planned values. Through this evaluation,

the SME was able to analyze the failure of their plans, analyse the failure causality, and based on that quantification of marketing risks – usually by comparing expected and real sales in quantity or incomes. In the controlling management system, risk control needs risk quantification. If companies predict risk and its impact, they would be able to manage it. The findings showed that the ROA increased in 100% of SMEs in experimental research testing. The comparison of SMEs which were not experimentally implemented in the auditing, controlling marketing, risk management ROA was 5.3%, and in tested experimental SME was average ROA 17.9% – 3,3 x higher. Based on that analyses result and findings of the experimental testing process, it was proven that the auditing (controlling system for marketing risk management) had a potential for SME performance and stability increases. Moreover, Bunget and Brinduse (2019) and Laval (2018) confirmed these findings. The hypotheses H2 should be declared as proven.

In conjunction with hypotheses H1 and H2, Q1 could be answered. Figure 2 shows that the auditing (controlling system) is applicable for current marketing risk management. Moreover, if it operates correctly, it has the potential for decreasing marketing risk impact. This auditing's impact is higher marketing performance, risk impact decreasing, and higher accuracy in future prediction. That gave SMEs a competitive advantage and supported their flexibility, performance, and long-term stability. The research question Q1 should be declared as answered.

H3 – The corporate culture creates a necessary supporting environment, which is connecting the Controlling management system and Auditing and accelerates its performance and flexibility.

For any functional managerial system, it is necessary to have an environment where people cooperate, share information, and manage their operations to achieve set goals. Without this environment, performance and effectiveness are decreasing, which negatively impacts SME stability and competitiveness. The experimental testing allowed confirming this assumption. The corporate culture value at the Marketing risk management model is not as important as other variables. However, the findings showed that without corporate culture development, SMEs could not use the full potential of auditing (controlling). By experimental testing, 92% of respondents declared that they see the corporate culture as a «glue». That connects, holds, and supports marketing risk management in high performance. Based on corporate culture variable depth research, SMEs who operated controlling or auditing on highest (3 or 4 implementation) levels also 79% were evaluated on highest 3 or 4 corporate culture level implementation. These statements are consistent with the conclusion of Guiso et al. (2015), Liao (2018), and Eisend et al. (2016) as well. Based on these findings, the H3 hypotheses should be declared as proven.

In the context of H3, it is also possible to answer the research question Q2. The position and role of corporate culture in marketing risk management should be seen as a component that supports, connects, and encourages people for higher performance and set goals achieving. The research question Q2 should be declared as answered. Based on the above findings, it is possible to evaluate the research aims. Thus, critical parts of marketing risk management factors are continuous risk analysis, risk evaluation, quantification, and risk future prediction and risk continuous control. The research results were used for auditing (controlling the marketing risk management process). The experimental testing process allowed verifying this process and its functionality. There are explanations of the consequences of marketing risks, ROA, auditing, controlling management, and corporate culture. The research finding also showed that auditing (controlling marketing risk management) could increase SME performance and stability. The research aims should be declared as achieved. The above-presented results were put in the context with other scientific perspectives. The initial idea and submitted hypotheses about the correlation between risk, marketing, corporate culture, auditing, and controlling have proven interesting. These SMEs' procession chains and processes are often solved as scientific, methodology, or business issues. But either separately or at most in pairs. This statement is evidenced primarily by Mareš and Petru (2018) or by Dvorsky et al. (2019) in the context of risk. But in the current business and line with the impacts of Industry

4.0, it is important to use each SME process completely interdisciplinary and combine it with other useful processes. That would allow more efficient management of selected risks of SMEs.

Conclusion. Economic development and continuous digitization put companies into new roles. The same applies to SMEs, which are an important part of each economics. That allows SMEs to take advantage of new opportunities while they are responding to the new risks too. Risk management could be used for these activities concerning selected processes of SMEs. Therefore, this paper aimed to analyze SME risk management, identify critical risk factors, and develop risk management applications for SMEs. The second step was to analyze risk management's consequences and explain the variables (ROA, Auditing, Controlling Management, Marketing, and Corporate Culture). Subsequently, the experimental research was carried out on selected sample n=432 of SMEs. The research has mainly shown that critical parts of marketing risk management factors are continuous risk analysis, risk evaluation, quantification, and risk future prediction and risk continuous control. The research finding showed that auditing (controlling marketing risk management) could increase SME performance and stability. Based on the research findings, it could be recommended to continually increase the interaction of presented processes, which would lead to SMEs' long-term stability and competitiveness. That makes possible the contribution to the adaptation of the new contexts in the business.

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Аудит і контроль як інструментарій управління маркетинговим ризиком: на прикладі МСП

Сучасне гіперконкурентне ринкове середовище, стрімкий розвиток маркетингових інструментів забезпечують появу нових можливостей для розвитку як малого та середнього бізнесу (МСП), так і економіки в цілому. З іншого боку, мінливість бізнес-середовища обумовлює появу екзогенних та екзогенних шоків на які МСП повинні оперативно реагувати. Авторами зазначено, що МСП є основним рушієм економічного розвитку країн Європейського Союзу, генеруючи найбільшу питому вагу ВВП. Тому, конкурентоспроможність та довгострокова стабільність МСП є вирішальними факторами у забезпеченні реалізації стратегії Європейської згуртованості та розвитку. Метою статті є аналіз управління ризиками МСП, виявлення основних факторів, що провокують їх виникнення та розроблення системи управління ними на прикладі МСП. Авторами проаналізовано ефективність управління ризиками за наступними критеріями: ROA, ефективність аудиту ризиків, контролю управління ними, ефективність маркетингових заходів, наявність та дотримання корпоративної культури. Для досягнення поставленої мети, у статті розглянуто два дослідницькі питання та перевірено три гіпотези. Емпіричне дослідження проведено на основі панельних даних, сформованих для вибірки з 432 МСП ЄС. Період дослідження – 2017-2020 рр. Перевірку висунутих гіпотез здійснено з використанням статистичних методів аналізу. За отриманими результатами, розроблено маркетингову модель управління ризиками та перевірено її ефективність. Запропонована модель може бути використана для виявлення та уникнення потенційних ризиків при розробленні маркетингової стратегії МСП. У статті систематизовано напрями підвищення ефективності управління маркетинговими ризиками МСП для забезпечення їх довгострокової стабільності та конкурентоспроможності. Отримані результати дослідження мають теоретичне та практичне значення та можуть бути використані для подальших досліджень.

Ключові слова: управління ризиками, аудит, контролінг, маркетинг, МСП, корпоративна культура.