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THE IMPACT OF ONLINE BUSINESS OF SMALL AND MEDIUM-SIZED ENTERPRISES: AN EMPIRICAL RESEARCH

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Abstract: This empirical research explores the links between customized marketing, improved customer support, business efficiency, competitive advantage, and adaptation to market trends towards the online business of small and medium-sized enterprises. The research goal was a deeper understanding of the relationships between the mentioned independent and dependent variables. The study aims to provide a comprehensive understanding of how these variables influence medium-sized enterprises online business success. The methodology includes analyzing data collected through surveys among 232 respondents from small and medium enterprises from the territory of the Republic of Serbia. Different analysis methods were used, statistical test analysis of variance, multiple correlation analysis of variables and to confirm the hypothesis multiple regression analysis, as well as qualitative analysis, to identify the key factors of online business of small and medium enterprises. Qualitative analysis complements these methods by identifying pivotal factors impacting small and medium-sized enterprises online business strategies. The results of the research indicate a significant positive and strong impact of customized marketing, improved customer support, business efficiency, competitive advantage, and adaptation to market trends towards the online business of small and medium-sized enterprises. Also, it was found that the online business of small and medium-sized enterprises can be explained directly through improved customer support at 54.76%, business efficiency at 46.24%, customized marketing at 44.89%, adaptation to market trends at 34.81%, and competitive advantage at 16.00%. By monitoring consumer and industry trends, small and medium-sized enterprises can adjust strategies and offerings to meet evolving customer needs, fostering revenue growth and expanding market presence. These studies contribute to the theoretical understanding of the online business of small and medium-sized enterprises.

Keywords: tailored marketing, improved customer support, efficient operations, competitive edge, adaptation to market trends, online business of small and medium-sized enterprises

Field: Social Sciences

1. INTRODUCTION

The proposed research model is defined by variables (Figure 1), based on which: subject, problem, tasks and hypotheses are set, where the independent variables are: Tailored marketing (abbr. TM), Improved customer support (abbr. ICS), Efficient operations (abbr. EO), Competitive edge (abbr. CE) and Adaptation to market trends (abbr. AMT), and the dependent variable Online business of small and medium-sized enterprises (abbr. OBSME). The research challenge resides in the insufficient comprehension of the interconnections among the many factors of TM, ICS, EO, CE, AMT and OBSME success. The subject of this research is the identification and analysis of the influence of the independent variables TM, ICS, EO, CE, and AMT on the dependent variable OBSME. This study aims to explore the interconnections among the aforementioned factors, aiming to offer strategic insights for SMEs seeking to optimize their approaches and gain competitive advantages in the online market. Specifically, it seeks to examine how Online Business Strategic Management Effectiveness (OBSME) relates to Technology Management (TM), Information and Communication Systems (ICS), Entrepreneurial Orientation (EO), Customer Engagement (CE), and Adoption of Advanced Marketing Technologies (AMT). The research endeavors to develop a comprehensive understanding of the pivotal variables influencing small and medium-sized enterprises success in digital commerce to gain competitive advantages. Customized marketing entails tailoring customer interactions by delivering targeted messages, products, and services that align with individual customer preferences and needs. According to (Kannaiah et al., 2024; Ejjami, 2024; Alshagawi & Mabkhot, 2024; Banerjee, 2023; Jain, 2024), customized marketing significantly impacts the online success of small and medium-sized enterprises by enhancing customer engagement, fostering improved customer loyalty, optimizing resource utilization, and deepening market understanding. According to (Costa, et al, 2024; Liu, & Ko, 2024; Kibor, 2024; Zoirov, 2023; Bradač Hojnik & Huđek,2023) enhanced customer support plays a crucial role in the online success of small and medium-sized enterprises,

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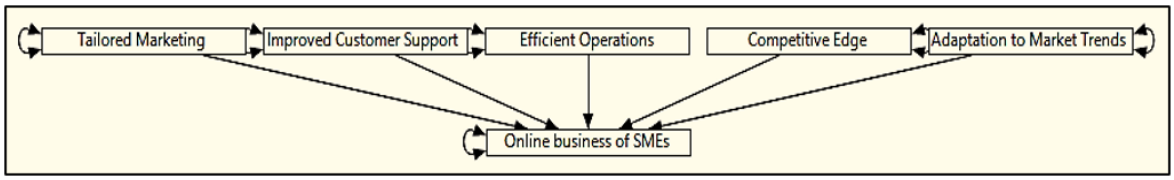
leading to higher customer loyalty, strengthened brand reputation, decreased product returns, elevated customer satisfaction levels, and increased referrals and repeat purchases. The efficient utilization of resources and processes by small and medium-sized enterprises, also known as operational efficiency, can significantly impact their online business by reducing costs, speeding up order processing, improving inventory management, enhancing customer service, and increasing competitiveness. (Weng, et al., 2024; Liu, Chen & Ko, 2024; Ayaz & Tatoglu, 2024; Barata, et al., 2023; Chaudhary, Gkioulos & Katsikas, 2023). As per (Weng et al., 2024; Asikin et al., 2024; Przychocka & Sikorski, 2024; Kamar et al., 2023; Omidvar & Palazzo, 2023), competitive advantage is critical for small and medium-sized enterprises in the online domain. It significantly impacts their success through factors such as product/service differentiation, superior customer service, efficient cost management, innovation and technological progress, and agility in adapting to market changes. According to (Wu, Botella-Carrubi & Blanco-González-Tejero, 2024; Gil-Cordero et al, 2024; Hui, et al., 2024; Arce et al., 2024; Onngam & Charoensukmongkol, 2023), responding to market trends can greatly affect the online operations of small and medium-sized enterprises for multiple reasons, including maintaining competitiveness, discovering new business opportunities, refining marketing strategies, optimizing products and services, and strengthening the brand.

Figure 1. Theoretical research model



Source: Author's research

2. MATERIALS AND METHODS

An electronic questionnaire was utilized, which was completed online through the Internet. The questionnaire was conducted on the territory of the Republic of Serbia electronically on a sample of 232 respondents from the same number of small and medium-sized enterprises. The task of the research is: to determine whether or not there is a significant relationship between customized marketing, improved customer support, business efficiency, competitive advantage, adaptation to market trends and online business of small and medium-sized enterprises. The e-questionnaire consisted of two elements, the first in which questions were asked about the respondent's profile: gender, schooling and chronological age, and the second in which 3 statements were defined for all the set variables from the theoretical model, to which the respondents could answer their personal attitude using a Likert scale with 5 possible attitudes (1 - and totally disagree, 2 - partially disagree, 3 - neither agree nor agree, 4 - partially agree and 5 - I totally agree). The assertions of the electronic questionnaire originate from the author's personal experiences and the sources mentioned in the research's introduction. The study utilized multiple regression analysis to evaluate the influence of the specified independent variables on the dependent variable and to predict changes in the dependent variable based on modifications in the independent variables. The mean values of the dependent variable were compared across various independent variables using an analysis of variance (ANOVA). Figure 1 depicts the theoretical system model of the research.

Null hypothesis H0: T*here is no significant relationship between customized marketing, improved customer support, business efficiency, competitive advantage, adaptation to market trends and online business of small and medium-sized enterprises.*

Alternative hypothesis Ha: *There is a significant relationship between customized marketing, improved customer support, business efficiency, competitive advantage, adaptation to market trends and online business of small and medium-sized enterprises.*

3. RESULTS

Based on the Descriptive statistics research, several conclusions were drawn: the majority of respondents were women (125 or 53.88%), while men made up a smaller part (107 or 46.12%), this suggests a relatively balanced gender distribution in the sample. The majority of respondents have completed primary or secondary school (137 or 59.05%), while a smaller number of respondents have completed college or higher education (95 or 40.95%), this indicates diversity in the educational level

of respondents. Most respondents are between 18 and 35 years old (96 or 41.38%), a smaller part of respondents belong to the age group of 36 to 58 years (80 or 34.48%), while the smallest number of respondents are older than 58 years (56 or 24.13%), this suggests the diversity of age groups among the respondents. According to the guidelines for determining factor loadings based on sample size, we can conclude that a sample of 232 respondents is sufficient for significance. Based on the significance level of 0.40 for factor loadings with more than 200 respondents, we consider it to be significant. This conclusion is supported by the obtained Cronbach's coefficient for all statements in the research, which is α=0.8590. The obtained Cronbach's coefficient α=0.8590 is greater than the theoretical coefficient, indicating good consistency. This is in line with the rule of internal consistency, which states that a coefficient between 0.7 and 0.9 reflects good consistency. Both indicators demonstrate strong reliability and internal consistency of the scale for the sample of 232 respondents, encompassing all statements related to the research variables. Table 1 displays the average and standard deviation of all statements made in the Survey. High mean values imply a generally positive attitude among respondents, whereas standard deviations reflect the extent of heterogeneity in opinions among respondents.

Table 1. Means and standard deviations for the statements made

Claim	Mean	Std Dev
TM1 - We tailor our marketing strategy to the specific needs of our target online customers.	4.1853448276	0.9282254457
TM2 - We regularly use personalized email campaigns to capture the attention of online audiences.	4.4310344828	0.7919960856
TM3 - Our social media marketing efforts target our online audience directly.	3.9310344828	1.1336959282
ICS1 - Our online customer support is easily accessible and provides quick answers to customer questions.	4.3577586207	0.782121752
ICS2 - We regularly collect customer feedback to improve our online customer support.	4.3103448276	0.8365440462
ICS3 - Our online platform has functionality for direct communication with users via chat or e-mail.	4.275862069	0.8786669054
EO1 - We regularly implement process automation technologies to improve the efficiency of our online sales.	4.2543103448	0.8527919252
EO2 - We have a well-integrated inventory management system that helps us efficiently fulfill online orders.	4.4181034483	0.8334042364
EO3 - Our online platform is optimized for fast loading and easy navigation, which improves the user experience.	4.3318965517	0.9055957966
CE1 - Our online platform offers unique products or services that are difficult to find among competitors.	4.3103448276	0.8208726547
CE2 - We price our products or services competitively compared to other online sellers in our industry.	4.1939655172	0.926454751
CE3 - We regularly monitor and analyze the activities of competitors in order to keep pace and stand out in the market.	3.8620689655	1.1235114383
AMT1 - We regularly monitor trends in our industry and adjust our online strategy accordingly.	4.4827586207	0.9209703016
AMT2 - We have a flexible online platform that allows us to quickly adapt to changes in the market.	4.125	1.134609035
AMT3 - Our products/services reflect the current trends and needs of the target online audience.	4.5517241379	0.7541495894
OBSME1 - The impact of marketing activities, customer support and operational processes on the online success of your business is great.	4.1982758621	0.8848883079
OBSME2 - Competitive advantage, adaptation to market trends and online business are connected in your company.	4.2974137931	0.8438174652
OBSME3 - The effective online business of your company compared to the competition is much higher.	4.3922413793	0.9427463668

Source: Author's research

Table 2 shows: Mean and Std Dev for all variables and they provide an insight into the general attitude of the respondents.

Table 2. Means and standard deviations for set variables

Variable	Tailored Marketing	Improved Customer Support	Efficient Operations	Competitive Edge	Adaptation to Market Trends	Online business of SMEs
Mean	4.1824713	4.3146552	4.3347701	4.1221264	4.3864943	4.295977
Std Dev	0.692667	0.6915527	0.6869202	0.5777075	0.6966902	0.6480393

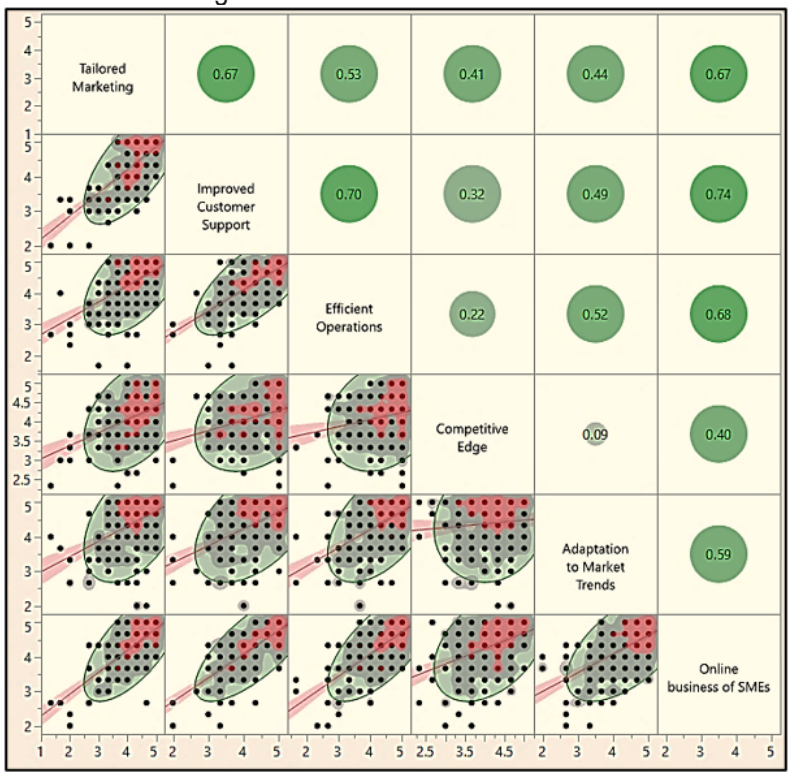
Source: Author's research

Figure 2 illustrates Pearson's correlation coefficients for each variable in the theoretical model that has been established. It is observed that all the relationships between the variables are directed positively, which implies the existence of a positive correlation or association between them. The highest

correlation coefficient was recorded between the independent variable ICS and the dependent variable OBSME, which is 0.74, which indicates a moderately strong positive correlation. The lowest correlation coefficient was recorded between the independent variables CE and AMT, with a value of 0.09, indicating a slight positive correlation. Direct correlations according to the dependent variable OBSME were given in the following order of independent variables: ICS 0.74, EO 0.68, TM 0.67, AMT 0.59 and CE 0.40. The dependent variable OBSME can be described

directly through the independent variables: ICS with 54.76%, EO with 46.24%, TM with 44.89%, AMT with 34.81% and CE with 16.00%.

Figure 2. Pearson's correlation coefficient



Source: Author's research

It can be concluded that the theoretical multiple regression model explains about 69.54% of the variation of the dependent variable OBSMEs using all the independent variables in the model. The multiple correlation coefficient is 0.833884 and it is strong and positive. The average error of the model is about 0.36, which suggests that the theoretical model provides accurate predictions. The results of the ANOVA analysis indicate that the theoretical model contributes significantly to the explanation of the variation in the data, given the high F-ratio and low p-value [$F(5,226)=103.1738$, $p<0.0001$]. The theoretical model is statistically significant. The alternative hypothesis Ha is accepted. Analysis of the regression coefficients from Table 3 Parameter Estimates found that the independent variables: TM, ICS, EO, CE and AMT have a statistically significant influence on the dependent variable OBSME. It indicates that the implementation of the independent variables: TM, ICS, EO, CE and AMT can significantly affect the outcome of the dependent variable OBSME. All of the independent factors exhibit a p-value below 0.05, indicating a strong statistical significance in their impact on the dependent variable OBSME.

This suggests that the independent variables are: TM, ICS, EO, CE and AMT and can be used in predicting or explaining the variation in the dependent variable OBSME. The order of the largest group influence on the dependent variable OBSME is by the following independent variables: ICS, AMT, EO, TM and CE.

Table 3. Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob>|t|	Std Beta	VIF
Intercept	-0.220977	0.225066	-0.98	0.3272	0	.
TM	0.1900879	0.049115	3.87	0.0001	0.203178	2.0445866
ICS	0.2659976	0.055724	4.77	<0.0001	0.283858	2.6233807
EO	0.2106825	0.050587	4.16	<0.0001	0.223323	2.13308
CE	0.177139	0.045618	3.88	0.0001	0.157914	1.2269284
AMT	0.2121922	0.041707	5.09	<0.0001	0.228122	1.4914628

Source: Author's research

Based on the data from Table 3 Parameter Estimates, a multiple linear regression equation was formed, which is shown at Formula 1:

$$OBSME=-0{,}220977+0{,}1900879\cdot TM+0{,}2659976\cdot ICS+ \quad (1)$$
$$+0{,}2106825\cdot EO+0{,}177139\cdot CE+0{,}2121922\cdot AMT$$

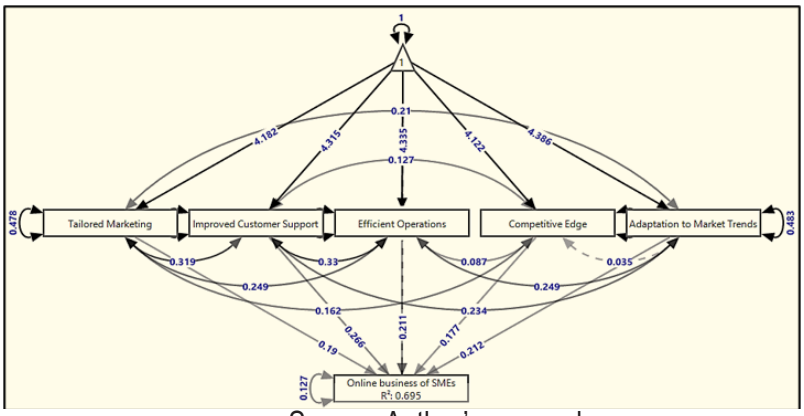
The research includes an attachment (Figure 3) that provides an extensive overview of non-standard contribution sizes to the theoretical research model. Additionally, Figure 4 presents a full analysis of standard contribution sizes to the theoretical research model.

4. CONCLUSION

According to the data gathered in this study, it is clear that there has been increase in various important areas - customized marketing (TM), improved customer support (ICS), operational efficiency (EO), competitive advantage (CE), and adaptation to market trends (AMT) - positively impacts the online business performance of small and medium-sized enterprises (OBSME). Customized Marketing (TM): By tailoring messages and offers, SMEs can effectively target their audience. As personalized marketing improves, small and medium-sized enterprises attract higher-quality visitors to their online platforms, leading to increased sales and business growth. Improved Customer Support (ICS): Enhancing customer support improves satisfaction, loyalty, and brand reputation. Positive customer experiences increase the likelihood of repeat business and referrals, contributing to revenue growth and business expansion. Operational Efficiency (EO): Streamlining operations reduces costs and enhances productivity. Improved processes enable SMEs to optimize resource utilization, thereby increasing profitability and supporting overall business growth. Competitive Advantage (CE): small and medium-sized enterprises with a clear competitive edge attract more customers and gain market share. Small and medium-sized enterprises improve their market position and achieve continuous business growth by offering innovative products/ services, providing excellent customer service, and maintaining competitive pricing. Adaptation to Market Trends (AMT): Adapting to market trends ensures small and medium-sized enterprises remain relevant and competitive. By keeping track of consumer and industry trends, small and medium-sized enterprises can adjust their strategies and offerings to meet changing customer needs, thereby driving revenue growth and expanding their market presence.

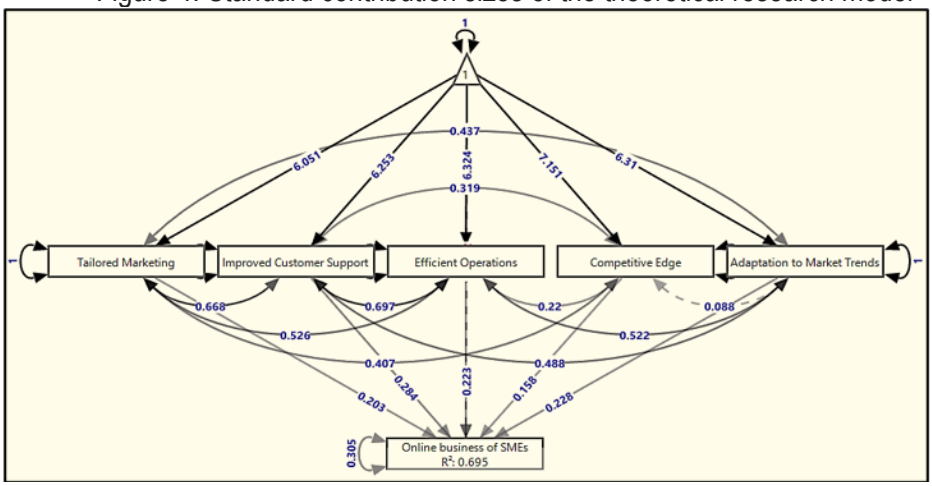
5. ADDITIONAL DATA

Figure 3. Non-standard contribution sizes of the theoretical research model



Source: Author's research

Figure 4. Standard contribution sizes of the theoretical research model



Source: Author's research

REFERENCE

Alshagawi, M., & Mabkhot, H. (2024). The impact of strategic entrepreneurship and entrepreneurial marketing, entrepreneurship values on small and medium enterprises' performance: evidence from Saudi Arabia. Cogent Business & Management, 11(1), 2316947.

Arce, C.G.M., Valderrama, D.A.C., Barragán, G.A.V., & Santillán, J.K.A. (2024). Optimizing business performance: Marketing strategies for small and medium businesses using artificial intelligence tools. Migration Letters, 21(S1), 193-201.

Asikin, M.Z., Fadilah, M.O., Saputro, W.E., Aditia, O., & Ridzki, M.M. (2024). The Influence of Digital Marketing on Competitive Advantage and Performance of Micro, Small and Medium Enterprises. International Journal of Social Service and Research, 4(03), 963-970.

Ayaz, O., & Tatoglu, E. (2024). Unveiling the Power of Social Value: Catalyzing Circular Economy in Emerging Market SMEs. Journal of Cleaner Production, 142245.

Banerjee, B. (2023). Challenges and opportunities for micro, small, and medium enterprises: navigating the business landscape. The American Journal of Interdisciplinary Innovations and Research, 5(05), 13-17.

Barata, S.F., Ferreira, F.A., Carayannis, E.G., & Ferreira, J.J. (2023). Determinants of E-Commerce, Artificial Intelligence, and Agile Methods in Small-and Medium-Sized Enterprises. IEEE Transactions on Engineering Management.

Bradač Hojnik, B., & Huđek, I. (2023). Small and Medium-Sized Enterprises in the Digital Age: Understanding Characteristics and Essential Demands. Information, 14(11), 606.

Chaudhary, S., Gkioulos, V., & Katsikas, S. (2023). A quest for research and knowledge gaps in cybersecurity awareness for small and medium-sized enterprises. Computer Science Review, 50, 100592.

Costa, A.C.F., Capelo Neto, F., Espuny, M., Rocha, A.B.T.D., & Oliveira, O.J.D. (2024). Digitalization of customer service in small and medium-sized enterprises: drivers for the development and improvement. International Journal of Entrepreneurial Behavior & Research, 30(2/3), 305-341.

Ejjami, R. (2024). Launching AI marketing solutions for small and medium enterprises in Morocco: a teaching case study. International Journal of Teaching and Case Studies, 14(3), 276-292.

Gil-Cordero, E., Maldonado-López, B., Ledesma-Chaves, P., & García-Guzmán, A. (2024). Do small-and medium-sized companies intend to use the Metaverse as part of their strategy? A behavioral intention analysis. International Journal of Entrepreneurial Behavior & Research, 30(2/3), 421-449.

Hui, G., Al Mamun, A., Masukujjaman, M., Makhbul, Z.K.M., & Ali, M.H. (2024). The relationship between mass customization and sustainable performance: The role of firm size and global E-commerce. Heliyon, 10(6).

Jain, P. (2024). Cloud Adoption Strategies for Small and Medium Enterprises (SMEs): A Comprehensive Guide to Overcoming Challenges and Maximizing Benefits. Sch J Eng Tech, 1, 28-30.

Kamar, K., Sasmita, D., Dharta, F.Y., & Rahma, A.A. (2023). Competitive Advantage in Java, Indonesia's Small and Medium-Sized Businesses. Quality-Access to Success, 24(195).

Kannaiah, P., Sadanand, V. K., Tammi, S. K., Deepak, C., Hossain, M. A., & Arora, K. (2024). Role Of Financial and Marketing Strategies for The Growth of Small-Scale Enterprises. Migration Letters, 21(S5), 1200-1205.

Kibor, J. (2024). Digital Capability and Performance of Micro, Small, and Medium-Scale Enterprises: A Review. East African Journal of Business and Economics, 7(1), 83-87.

Liu, G., Chen, Y., & Ko, W.W. (2024). The influence of marketing exploitation and exploration on business-to-business small and medium-sized enterprises' pioneering orientation. Industrial Marketing Management, 117, 131-147.

Omidvar, M., & Palazzo, M. (2023). The Influence of Corporate Social Responsibility Aspects on Business Model Innovation, Competitive Advantage, and Company Performance: A Study on Small-and Medium-Sized Enterprises in Iran. Sustainability, 15(22), 15867.

Onngam, W., & Charoensukmongkol, P. (2023). Effect of social media agility on performance of small and medium enterprises: moderating roles of firm size and environmental dynamism. Journal of Entrepreneurship in Emerging Economies.

Przychocka, I., & Sikorski, M. (2024). Revolutionizing SME Management: The Digital Transformation of Financial Operations. European Research Studies Journal, 27(2), 78-85.

Weng, Q., Wang, D., De Lurgio II, S., & Schuetz, S. (2024). How do small-to-medium-sized e-commerce businesses stay

competitive? Evidence on the critical roles of IT capability, innovation and multihoming. Internet Research.

Weng, Q., Wang, D., De Lurgio II, S., & Schuetz, S. (2024). How do small-to-medium-sized e-commerce businesses stay competitive? Evidence on the critical roles of IT capability, innovation and multihoming. Internet Research.

Wu, C. W., Botella-Carrubi, D., & Blanco-González-Tejero, C. (2024). The empirical study of digital marketing strategy and performance in small and medium-sized enterprises (SMEs). Technological Forecasting and Social Change, 200, 123142.

Zoirov, U. E. (2023). Digital transformation on small to medium-sized business enterprises. Экономика и социум, (1-1 (104)), 115-122.