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Original scientific paper

Entrepreneurial Factors Influencing Recovery from Covid-19: A Country-Level Analysis

Igor GRAIĆ, Uglješa MARJANOVIĆ, Vukašin GROZDIĆ, Danijela ĆIRIĆ LALIĆ*, Bojan LALIĆ

Abstract: This study examines the impact of entrepreneurship ecosystem factors on the recovery of entrepreneurship from the COVID-19 pandemic and offers valuable insights to drive growth. By analyzing the Serbian dataset from the Global Entrepreneurship Monitor National Expert Survey in 2022, the study employs linear regression analysis to investigate the relationship between Entrepreneurial Framework Conditions and post-pandemic recovery. Data were collected through interviews with 40 experts representing the government, academia, and industry. The National Entrepreneurship Context Index score for Serbia's entrepreneurial environment quality in 2022 is 4.6 which positions Serbia in the middle of the continuum of included country scores. The results of the analysis have shown that Market openness (β = .474; p < .01) and Achieving the UN Sustainable Economic Development Goals (β = .460; p < .01) have a direct positive impact on the recovery of entrepreneurs from the consequences of COVID-19. The limitations of the study are related to the demographics of the sample, self-reported data, geographic scope, focusing only on the Republic of Serbia, cross-sectional design that does not capture the dynamic and evolving nature of the recovery process. Given these limitations, future work could incorporate a more diverse sample to enhance the generalizability of the findings.This research provides important insights and policy recommendations to leverage entrepreneurial practices for economic recovery following the impact of the COVID-19 pandemic.

Keywords: COVID-19; entrepreneurship; GEM; NES; SDG

1 INTRODUCTION

Entrepreneurship has historically been a crucial engine for economic development and societal transformation [1-6]. The advent of the Fourth Industrial Revolution marked a pivotal moment in the evolution of entrepreneurship, acknowledging entrepreneurs as vital agents in the implementation of novel technologies across industries [7-8]. Furthermore, entrepreneurs were recognized as catalysts in the expansion of markets and the globalization of the economy [9]. However, despite their transformative role, entrepreneurs are vulnerable to external shocks, such as natural disasters, wars, and pandemics, which can significantly impede their activities [10, 11]. The COVID-19 pandemic, in particular, has been notably disruptive, severely impacting the global economy and hitting small and medium-sized enterprises (SMEs) hardest [12-14]. SMEs play a crucial role in economic development, especially in developing countries [17]. However, the uncertainty and economic downturn caused by the pandemic have presented unprecedented challenges for entrepreneurs, who are key drivers of economic growth and job creation [1, 2, 16, 18, 19].

Despite the extensive research on entrepreneurial crises, much of the existing literature is skewed towards crisis management in medium to large companies, with micro and small entrepreneurs often overlooked. There is, therefore, a distinct need for further studies to address this gap and contribute to a more comprehensive understanding of how small organisations can navigate and recover from crises, especially in developing countries.

The paper will explore the specific entrepreneurial factors that have a substantial impact on the country's recovery process. This may involve investigating the influence of factors to support in facilitating recovery efforts. Given the ongoing global efforts to mitigate the pandemic's impact on businesses, the importance of market openness and sustainable development in aiding SMEs' recovery is becoming increasingly evident [20]. Starting from these considerations, this study seeks to answer the following research question:

- *RQ: Which factors within the entrepreneurial ecosystem influenced the recovery of entrepreneurship from COVID-19?*

Utilizing the Serbian dataset from the Global Entrepreneurship Monitor (GEM), National Expert Survey (NES) for 2022, this study employs linear regression analysis to probe the relationship between Entrepreneurial Framework Conditions and recovery from the COVID-19 pandemic. Data were collected from interviews with 40 experts spanning government, academia, and industry. This research aims to address the challenges faced by entrepreneurs and propose evidence-based predictive solutions to boost entrepreneurship recovery from COVID-19 through various strategies within the entrepreneurial ecosystem. By analyzing the key drivers of economic recovery from the recent COVID-19 pandemic, this paper endeavours to provide valuable insights that could help propel growth and facilitate the recovery process for entrepreneurs navigating these unprecedented times.

The remainder of the paper is organised as follows: Section 2 presents a literature review, and Section 3 describes the materials and methods. Section 4 presents the result of measurement and linear regression. Section 5 includes a discussion of theoretical and managerial implications while Section 6 concludes the paper and provides limitations along with directions for future research.

2 LITERATURE REVIEW

2.1 The Impact of COVID-19 on Global Entrepreneurship

The COVID-19 pandemic, which emerged in China towards the end of 2019, rapidly spread globally throughout the initial quarter of 2020. This resulted in significant adverse effects on the worldwide economy and sustainability [16, 21]. It altered almost all aspects of human life, such as interactions, belief expressions, customs, and financial transactions [12, 15, 16]. According to Karabag [22], this outbreak led to economic, social, political, and commercial consequences, causing market instability for businesses globally. The impact of COVID-19 was felt across all sectors [13] with the retail industry

being notably affected due to imposed social distancing measures leading to the closures of physical stores. Bartik et al. [23] argued that SMEs face more disruption compared to larger enterprises as they are generally not as equipped to handle such situations.

Small businesses are considered the backbone of any economy, and their safeguarding has become even more critical in light of the global economic fallout from COVID-19 [24]. Governments have implemented extensive health and economic measures to alleviate the pandemic's impact. Designing effective policies and programs at national, regional, or global levels necessitates a comprehensive understanding of the pandemic's social and economic consequences [25]. The Government of the Republic of Serbia has implemented several measures to assist entrepreneurs in recovering from the impacts of the COVID-19 pandemic. These include tax incentives, employee subsidies, loans for entrepreneurs, tax and contribution payments deferment, direct financial aid, and a support program for business digitization. These measures aim to help entrepreneurs adapt to new business conditions and enhance their online presence.

2.2 Entrepreneurial Adaptation and Crisis Management

The COVID-19 pandemic has necessitated entrepreneurs to adapt to a new environment and take appropriate measures. While this global health crisis presented numerous challenges, it also opened new doors for entrepreneurship [26]. In response to changing conditions, many entrepreneurs have redirected their operations toward new markets. Previous studies have underscored that entrepreneurs who managed to adapt to these new ecosystem rules and targeted their businesses toward new markets were able to survive the crisis and maintain their market positions [27-30].

According to Cavalcante and Savart [31], crisis management is crucial for entrepreneurs navigating these external influences. They argued that entrepreneurs should be prepared to react swiftly to environmental changes, re-evaluate their strategies, and adapt to new circumstances. Furthermore, entrepreneurs can leverage opportunities that arise during crises, such as falling real estate prices or new market developments, to improve business efficiency and ensure survival in a crisis period.

2.3 Entrepreneurship and Sustainable Development Goals

Entrepreneurship holds a key role in realising sustainable development goals, particularly in the context of establishing new business models and innovative solutions [32]. Before the pandemic, entrepreneurs faced a range of challenges in striving towards sustainable development, including financing difficulties, balancing profitability and sustainability, and measuring business sustainability [33].

For entrepreneurs to contribute effectively to sustainable development goals, clear strategies and objectives are required. Mónico et al. [34] argued that entrepreneurs should have well-defined sustainability goals and integrate sustainable practices into their daily operations. Entrepreneurs can employ various tools, such as product life cycles and environmental impact assessments, to gauge their businesses' sustainability.

Moreover, entrepreneurs can leverage their social responsibility to contribute to sustainable development goals. As Deegan [35] stated, entrepreneurs can utilize social responsibility to achieve sustainable development objectives. Furthermore, the development of innovative products and services can help realise sustainable development goals [36-38]. Additionally, entrepreneurship can contribute to both personal and sustainable development goals through cooperation and partnership [39, 40].

2.4 Crisis Recovery Strategies and Market Openness

Numerous recovery strategies have been proposed in the wake of the crisis. Authors [41] suggested strategies for acquiring competitive advantages, such as adopting new pricing models, collaborating with competitors, and adjusting customer offerings. Ratten [42] advocated for innovative and forward-thinking measures to tackle the COVID-19 pandemic.

The pandemic's aftermath has underscored the lack of methods to assess an entrepreneur's potential resilience. Agile and resilient new businesses can use the global disorder to identify opportunities [43]. Community and support for entrepreneurs are crucial during the recovery period after a crisis [44].

The market's openness greatly influences entrepreneurs' recovery from the pandemic's effects [45]. An open market provides entrepreneurs access to a larger customer base and the opportunity to find new suppliers and business partners. Conversely, a closed market and trade restrictions can hinder entrepreneurs' access to the market, leading to income loss and job cuts. This is particularly challenging for smaller entrepreneurs and startups. However, market openness can also stimulate competition and business innovation [46].

2.5 Conceptual Framework for Entrepreneurial Recovery

To holistically investigate the recovery from the COVID-19 crisis in terms of entrepreneurial ecosystem factors (NES), this study proposes a conceptual framework (see Fig. 1). This framework aims to provide a comprehensive understanding of the interplay of various factors, including entrepreneurial resilience, market openness, government interventions, and sustainable development goals, in the recovery process.

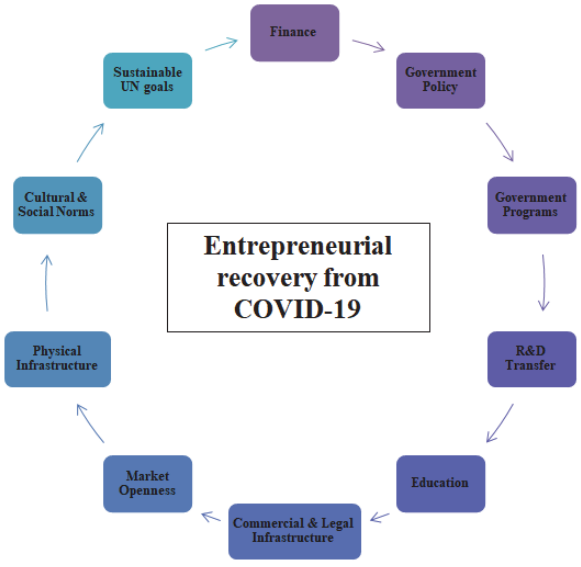

Figure 1 Conceptual framework for entrepreneurial recovery

Based on the aforementioned literature, this study postulates that various elements of the entrepreneurial ecosystem significantly impact the recovery of entrepreneurship from COVID-19 within the Republic of Serbia. This theoretical background sets the stage for the empirical analysis using the Serbian dataset from the GEM, NES for the year 2022. The forthcoming sections will delve into the methodologies and findings of this research, shedding light on the strategies to boost entrepreneurship recovery from COVID-19.

3 MATERIALS AND METHODS

3.1 Measures

This study leverages the measures developed by the GEM consortium. GEM is considered the leading global study on entrepreneurship, established in 1999 to explore why certain countries exhibit higher levels of entrepreneurship than others. With national teams gathering data from over 100 different economies, GEM examines the entrepreneurial behavior and attitudes of individuals, as well as the national context they operate, to gain insights into the entrepreneurial environments of various economies. GEM employs two data collection tools, the Adult Population Survey (APS) and NES, which are complementary. These tools are globally recognized for their contribution to entrepreneurship research and have been employed in numerous scholarly studies, thereby affirming their reliability and validity. The NES, the primary tool used in this study, provides a more detailed lens into the national context in which entrepreneurship occurs. It collects data from a minimum of 36 experts in each participating economy, covering nine entrepreneurial framework conditions. The number of 36 respondents used in the Global Entrepreneurship Monitor (GEM) National Expert Survey (NES) is not randomly chosen. It is based on statistical principles used for determining an adequate sample in research. With 36 respondents, a reasonable degree of reliability in the results can be achieved, assuming the respondents are well-chosen to represent the broader populations from which they come. Choosing 36 experts allows for the inclusion of a broad spectrum of opinions and experiences. This can be particularly important in the context of entrepreneurship, which is deeply woven into the social, economic, and cultural aspects of society.

These conditions reflect key aspects of a society's context that enable or hinder entrepreneurship. This paper focuses on how data from the NES is utilized and will describe it in greater detail. The NES instrument aims to collect information on the entrepreneurial environment in countries, including the regulatory framework, availability of financing, availability of entrepreneurship education, and more. The NES instrument also examines the obstacles and challenges faced by entrepreneurs in their countries. Experts participating in NES research should have extensive experience in the field of entrepreneurship and can provide deeper insights into the regulatory framework, availability of financing, and other factors affecting entrepreneurship in their countries.

NES measures the following dimensions: Entrepreneurial Finance (availability of financial resources), Government Policy (the extent to which public policies support entrepreneurship), Government Entrepreneurship Programmes (level of presence and quality of government programmes that are directly assisting SMEs), Entrepreneurship Education (the extent to which training in terms of SMEs is incorporated into the education and training system), Research and Development (R&D) Transfer (the extent to which national R&D leads to SMEs opportunities), Commercial and Legal Infrastructure (property rights, commercial, accounting, and legal services in terms of promoting SMEs), Market Openness (opportunity for entering the market), Physical Infrastructure (SMEs accesses to physical resources in terms of land, space, transport etc. in a no discriminative way), Cultural and Social Norms (the extent to which cultural and social norms encourage SMEs), reaching the goals of sustainable economic development of the UN and Entrepreneurial recovery from the consequences of COVID-19.

3.2 Sample and Data Collection Procedure

The data used to test the conceptual framework were obtained from GEM NES Serbian dataset. The focus was on experts who are familiar with the entrepreneurship ecosystem in Serbia. Experts were representatives of the government, business associations, the academic community, and others, which should provide a rich array of perspectives on the subject matter. The study was performed in the paper-pen format in the middle of 2022. The sample included responses from 38 experts of different sociodemographic characteristics in terms of gender, age, and education. In terms of gender, the sample was skewed towards female participants, who made up approximately 68.4% of the sample. It is crucial to be aware of this disparity when interpreting the results, as the views and experiences of male participants may be underrepresented in this sample. Regarding age, the participants ranged from 25 to 61 years old, with an average age of approximately 40.24 years. The standard deviation of 8.83 indicates that there is a moderate spread in the ages of the participants, meaning that the sample is relatively diverse in terms of age. Lastly, the education level of the participants was also diverse, with the majority of participants holding a master's degree (50%), followed by a bachelor's degree (42.11%), and a minority having completed high school education (7.89%). The large percentage of participants with a master's degree suggests that the sample is highly educated, which may impact their perspective and understanding of the topic at hand. Detailed descriptive statistics relating to the demographic characteristics are shown in Tab. 1.

Table 1 Sample structure in terms of gender, age, and education of experts

Variable	Category	Participants (N = 40)		
		n	%	Cumulative percent
Gender	Male	12	31.60	31.60
	Female	26	68.40	100.0
Age	Range	25-61		
	M (SD)	40.24 (8.83)		
Education	High school	3	7.89	7.89
	Bachelor's degree	16	42.11	50.00
	Master's degree	19	50.00	100.00

4 RESULTS

In general, the PLS-SEM technique was conducted in SmartPLS to examine the model fit for each construct and to test the relationships among the constructs.

Tab. 2 presents descriptive statistics for the factors of the entrepreneurial ecosystem. These include measures of central tendency (mean) and dispersion (standard deviation), as well as skewness and kurtosis, which describe the shape of the distribution. Looking at the mean scores, Physical Infrastructure (M = 6.95) and Entrepreneurs' Recovery from COVID-19 (M = 6.18) have the highest scores, suggesting that they are the most pronounced factors within the entrepreneurial ecosystem. In contrast, Education (M = 3.46) has the lowest mean score, indicating that it is less pronounced compared to other factors. Cultural and Social Norms (SD = 2.12) has the highest standard deviation, indicating a greater variability or spread of data. Conversely, Financing (SD = 1.27) and UN Sustainable Development Goals (SD = 1.43) have the smallest standard deviations, suggesting that the scores are more tightly clustered around the mean. Notably, Education (Skewness = 1.55) is significantly positively skewed, suggesting a higher concentration of lower scores. Physical Infrastructure (Skewness = –0.39), on the other hand, is slightly negatively skewed, indicating a higher concentration of higher scores. Positive kurtosis indicates a more outlier-prone distribution (more heavy-tailed), while negative kurtosis indicates a less outlier-prone distribution (light-tailed). Education (Kurtosis = 2.05) has a positive kurtosis, indicating a higher likelihood of outliers, whereas Physical Infrastructure (Kurtosis = –0.79) has a negative kurtosis, suggesting a lower likelihood of outliers.

Table 2 Descriptive statistics

Factor	Min	Max	M	SD	Skewness	Kurtosis
Financing	2.00	7.17	4.02	1.27	0.60	–0.37
Government Policy	2.50	9.50	5.42	1.77	0.35	–0.49
Government Programmes	1.86	9.14	5.08	1.80	0.34	–0.41
Education	1.67	8.00	3.46	1.57	1.55	2.05
R&D Transfer	1.67	7.67	4.11	1.68	0.73	–0.36
Commercial & Legal Infrastructure	2.33	9.17	5.21	1.73	0.49	–0.37
Market Openness	2.00	9.00	5.07	1.80	0.22	–0.43
Physical Infrastructure	3.14	9.71	6.95	1.86	–0.39	–0.79
Cultural & Social Norms	1.00	8.20	4.09	2.12	0.46	–0.92
UN Sustainable Development Goals	2.62	8.46	4.88	1.43	0.82	0.43
COVID-19 recovery	3.00	10.00	6.18	1.65	0.06	–0.22

As shown in Tab. 3, all the model fit indices exceeded their respective common acceptance levels. The model encompasses 10 factors, namely Entrepreneurial Finance, Government Policy, Government Entrepreneurship Programmes, Entrepreneurship Education, Research and Development Transfer, Commercial and Legal Infrastructure, Market Openness, Physical Infrastructure, Cultural and Social Norms, and Achieving the UN Sustainable Development Goals. The "r" column represents the correlation between each factor and the recovery from COVID-19. Beta values reflect the strength and direction of these relationships. The Confidence Interval (CI) columns show the range within which our population parameter may lie with a specific level of confidence. The 'alpha' column represents the internal consistency of each factor, and "rhoC", "AVE", and "rhoA" indicate the reliability and validity of the measurements. Lastly, the Variance Inflation Factor (VIF) provides an indication of multicollinearity in the model. High VIF values (> 5) suggest that the predictor variables are highly correlated, which can undermine the statistical significance of an independent variable.

Looking at the correlation coefficient (r), Government Policy (.357*), Research and Development Transfer (.365*), Commercial and Legal Infrastructure (.505**), Market Openness (.616**), Physical Infrastructure (.507**), and achieving the UN Sustainable Development Goals (.496**) show a strong correlation with entrepreneurial recovery. The Beta values for Market Openness (0.474) and UN Sustainable Development Goals (0.46) indicate a positive relationship with the recovery of entrepreneurship from COVID-19. This suggests that efforts to improve market openness and achieve UN Sustainable Development Goals can directly contribute to the recovery of entrepreneurs from the consequences of COVID-19. The Variance Inflation Factor (VIF) gives an estimate of multicollinearity among predictors. All values are well below the threshold of 10, indicating that there is no severe multicollinearity in the model. The Confidence Intervals (CI) provide a range of plausible values for the parameters. Notably, the CIs for Market Openness and UN Sustainable Development Goals include zero in their ranges, suggesting these parameters are statistically significant.

Table 3 The results of the PLS-SEM analysis

Factor	*r*	*Beta*	*CI - Lower*	*CI - Upper*	*α*	*rhoC*	*AVE*	*rhoA*	*VIF*
Financing	.318	–0.037	–0.442	0.483	0.879	0.891	0.414	0.937	2.683
Government Policy	.357*	0.044	–0.538	0.753	0.858	0.881	0.485	0.982	4.724
Government Programmes	.313	–0.013	–0.534	0.552	0.890	0.914	0.608	0.913	3.033
Education	.281	0.11	–0.522	0.508	0.891	0.915	0.643	0.911	3.468
R&D Transfer	.365*	0.042	–0.398	0.56	0.862	0.892	0.585	0.877	3.347
Commercial & Legal Infrastructure	.505**	0.299	–0.402	0.908	0.874	0.904	0.613	0.907	4.487
Market Openness	.616**	0.474	0.016	0.965	0.896	0.921	0.660	0.906	2.709
Physical Infrastructure	.507**	–0.047	–0.571	0.459	0.897	0.920	0.626	0.907	2.425
Cultural & Social Norms	.246	–0.606	–1.187	0.109	0.927	0.942	0.765	1.023	3.490
UN Sustainable Development Goals	.496**	0.46	0.020	0.818	0.887	0.904	0.423	0.893	1.722

Note: *R^2 = .709; p < .0; **α, *rhoC* and *rhoA* - reliability coefficients; *AVE* - indicator of convergent validity

5 DISCUSSION

This research has addressed the most important entrepreneurial ecosystem factors regarding the recovery from the COVID-19 crisis. In this study, we have empirically tested the model for the recovery from COVID-19 based on factors such as government policies, Research and Development (R&D) transfer, commercial and legal infrastructure, market openness, physical infrastructure, and the attainment of UN Sustainable Development Goals. These have been identified as playing pivotal roles in this recovery process. The assessment, which focused on multidimensional factors, is consistent with the literature on entrepreneurship.

This study provides several important theoretical and practical implications for the entrepreneurial ecosystem influencing recovery from COVID-19. Based on our model and structural equations, it can be said that governments can catalyse entrepreneurship by instituting policies that provide financial aid, tax reductions, and simplified regulatory requirements. This approach has already seen successful implementation in the Republic of Serbia [42]. Governments can further contribute by fostering an environment conducive to innovation and entrepreneurship. The role of R&D transfer in aiding entrepreneurs' recovery from the pandemic is also noteworthy. This process involves the transmission of technology, knowledge, and expertise from research institutions to businesses, thereby facilitating the development of novel products and services. This not only cuts costs, and elevates productivity, but also enhances competitiveness and fosters economic recovery [45]. A robust commercial and legal infrastructure can significantly impact entrepreneurship and economic recovery. Such an infrastructure provides entrepreneurs with a stable and predictable environment for conducting business, enabling them to access financing, protect intellectual property, and efficiently resolve disputes. Moreover, an adequate physical infrastructure can augment productivity, minimize costs, and bolster connectivity, thereby enhancing competitiveness and stimulating economic recovery.

The research established significant correlations and predictive links between market openness, sustainable development, and entrepreneurs' recovery from the COVID-19 crisis. Both market openness and sustainable development can be instrumental in enabling SMEs to recover. Market openness refers to the unrestricted movement of goods, services, and capital between countries, which exposes SMEs to larger customer bases, increased export opportunities, and access to superior technology and inputs. Furthermore, it evens the playing field for SMEs, facilitating their competition with larger firms. Sustainable development, conversely, is the development that satisfies present needs without imperilling future generations' ability to fulfil theirs. SMEs adopting sustainable business practices are better positioned to adapt to shifting market conditions, trim operating costs, and build resilience against future challenges like climate change [45]. Market openness grants SMEs the opportunity to expand and diversify their customer base, penetrate new markets, and identify new business partners, thereby steering them toward sustainable development. With increased market access, SMEs can integrate themselves into global supply chains, uncover new investment opportunities, and benefit from the economies of scale that come with an expanded customer base. Market openness also encourages businesses to adopt more responsible and sustainable practices. Governments can further support SMEs by pursuing policies that incentivize market openness and sustainable development [25]. For instance, reducing export tariffs and facilitating international market access can stimulate business expansion, job creation, and growth. Besides, endorsing sustainable certifications and implementing sustainable practices may provide distinct competitive advantages. Finally, NES research can also be useful for decision-makers, who can use this information to develop policies and programs that support entrepreneurship in their countries. Market openness emerges as a critical factor in driving entrepreneurship recovery in the post-COVID-19 era. Policymakers are urged to embrace trade liberalization and reduce trade barriers to encourage international trade and investment. This can be achieved through the negotiation of trade agreements and the simplification of customs procedures. By attracting foreign direct investment (FDI) through incentives and streamlined regulations, policymakers can stimulate entrepreneurship by providing access to global markets and fostering cross-border collaborations. To capitalize on market openness, entrepreneurs must actively seek opportunities in international markets. Comprehensive market research can help identify niche segments and tailor products and services to meet global demand. Strategic partnerships with foreign businesses can provide access to new markets and customer segments, enhancing entrepreneurs' market reach. Additionally, embracing digitalization and technology will enable entrepreneurs to adapt swiftly to changing market dynamics, optimizing efficiency in cross-border transactions. Further, the study's findings underscore the crucial role of achieving the UN SDGs in fostering entrepreneurship recovery. Policymakers are encouraged to align economic development strategies with the SDGs, fostering sustainable and inclusive growth. Policies aimed at poverty reduction, quality education, clean energy, and responsible consumption contribute to an ecosystem that nurtures entrepreneurship. Supporting businesses committed to sustainability through financial incentives and technical assistance can bolster entrepreneurship in alignment with the SDGs. Policymakers can facilitate entrepreneurship recovery by implementing initiatives that promote environmentally and socially responsible business practices. Entrepreneurs, in turn, play a pivotal role in leveraging sustainable development to foster recovery. By incorporating sustainable practices into their business models, entrepreneurs can attract a growing number of socially conscious consumers. Seeking certification for sustainable business practices can enhance the reputation of entrepreneurs and their businesses, further driving customer loyalty and market share. Practical Applications and Implications: The paper's findings carry significant implications for policymakers and entrepreneurs seeking to navigate the challenges of entrepreneurship recovery post-COVID-19. By embracing market openness and

sustainable development, policymakers can create an ecosystem that supports entrepreneurial growth and innovation. A strategic focus on reducing trade barriers, promoting FDI, and aligning economic strategies with the SDGs will encourage entrepreneurship recovery and economic resilience. For entrepreneurs, the findings provide valuable insights into seizing market opportunities and embracing sustainable practices. By capitalizing on market openness and forming strategic partnerships, entrepreneurs can expand their market reach and access new customer segments. Sustainable practices not only attract a growing customer base but also contribute to environmental and social well-being, enhancing the long-term resilience of entrepreneurial ventures.

Meanwhile, sustainable practices can help these businesses become more resilient, resource-efficient, and environmentally responsible. The results underscore the need for governments, international organisations, and the private sector to collaborate to support SMEs in this challenging economic landscape. By embracing market openness and sustainable development, SMEs can emerge from this crisis stronger and better equipped to face future challenges. This recovery process can be facilitated by policies that promote investment in green energy, support sustainable sourcing, and encourage the adoption of sustainable practices in SME operations. Therefore, both governments and business owners should prioritize measures that support SMEs in achieving their growth ambitions, while also embracing sustainability practices to promote sustainable development in the post-COVID world.

6 CONCLUSION

This study examines factors within the entrepreneurship ecosystem that influence the recovery of entrepreneurship from COVID-19. Consequently, this paper provides theoretical and practical implications on how and in what way factors impact the recovery of entrepreneurship from COVID-19. Market openness and sustainable development are crucial factors in the recovery of SMEs from the COVID-19 pandemic. SMEs require access to global markets and supply chains, which can be facilitated by open trade policies and international cooperation.

Despite the valuable insights this study provides, it is not without its limitations. One primary constraint is the demographics of the sample. Predominantly female and highly educated, the sample might not accurately reflect the diverse perspectives within the entrepreneurial ecosystem. The underrepresentation of males and individuals with high school education could bias the findings, which may not be fully generalizable across different demographic groups.

The study's methodology might involve gathering data through surveys or interviews with experts in the field of entrepreneurship and economic recovery. While experts can provide valuable insights and expertise, self-reported data can be susceptible to biases and subjectivity. Experts' responses may be influenced by their personal experiences, perspectives, and beliefs, leading to potential inaccuracies in the data. The study is also limited by the geographic scope, focusing only on the Republic of Serbia. The business environments, cultural factors, government policies, and societal norms can vary considerably across countries, and these local differences can significantly influence entrepreneurial recovery. Thus, the findings might not be directly applicable to other cultural or geographical contexts. Furthermore, the cross-sectional design of the study poses another limitation. While this design provides a snapshot of the entrepreneurial recovery at a specific point in time, it does not capture the dynamic and evolving nature of the recovery process. Factors such as government policies, market conditions, and economic trends can change over time, and these changes might affect entrepreneurial recovery.

Given these limitations, future work could incorporate a more diverse sample to enhance the generalizability of the findings. Including a broader demographic range in terms of gender, education level, and professional background would provide a more comprehensive view of the entrepreneurial recovery process. In addition, expanding the geographical scope of the study would be valuable. Comparative studies across different countries or regions could reveal the effects of various cultural, societal, and policy factors on entrepreneurial recovery. Lastly, a longitudinal research design could help capture the dynamic nature of entrepreneurial recovery. Tracking the same set of entrepreneurs over time would provide insights into how the recovery process unfolds and how different factors might influence recovery at different stages.

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7 REFERENCES

[1] Sajjad, M., Kaleem, N., Chani, M., & Ahmed, M. (2020). Worldwide role of women entrepreneurs in economic development. *Asia Pacific Journal of Innovation and Entrepreneurship*, *14*(2), 151-160.

[2] Achim, M. V., Borlea, S. N., & Văidean, V. L. (2021). Culture, Entrepreneurship and Economic Development. An Empirical Approach. *Entrepreneurship Research Journal*, *11*(1), 20180091.

[3] Rusu, D., Roman, A., Tudose, B., & Cojocaru, O. (2022). An Empirical Investigation of the Link between Entrepreneurship Performance and Economic Development: The Case of EU Countries. *Applied Sciences*, *12*(14), 6867. https://doi.org/10.3390/app12146867

[4] Yu, D., Yang, L., & Xu, Y. (2022). The Impact of the Digital Economy on High-Quality Development: An Analysis Based on the National Big Data Comprehensive Test Area. *Sustainability*, *14*(21), 14468. https://doi.org/10.3390/su142114468

[5] Fernandes, C., Pires, R., & Gaspar Alves, M. C. (2023). Digital Entrepreneurship and Sustainability: The State of the Art and Research Agenda. *Economies*, *11*(1), 3. https://doi.org/10.3390/economies11010003

[6] Daskalopoulou, I., Karakitsiou, A., & Thomakis, Z. (2023). Social Entrepreneurship and Social Capital: A Review of Impact Research. *Sustainability*, *15*(6), 4787.

https://doi.org/10.3390/su15064787
[7] Hurduzeu, G., Lupu, I., Lupu, R., & Filip, R. (2022). The Interplay between Digitalization and Competitiveness: Evidence from European Countries. *Societies*, *12*(6), 157. https://doi.org/10.3390/soc12060157
[8] Sewpersadh, N. (2023). Disruptive business value models in the digital era. *The Journal of Innovation and Entrepreneurship*, *12*, 2. https://doi.org/10.1186/s13731-022-00252-1
[9] Filser, M., Kraus, S., Tierno, N., Kailer, N., & Fischer, U. (2019). Entrepreneurship as Catalyst for Sustainable Development: Opening the Black Box. *Sustainability*, *11*. https://doi.org/10.3390/su11164503
[10] Lee, Y., Kim, J., Mah, S., & Karr, A. (2023). Entrepreneurship in Times of Crisis: A Comprehensive Review with Future Directions. *Entrepreneurship Research Journal*. https://doi.org/10.1515/erj-2022-0366
[11] Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*, *13*, 215-246. https://doi.org/10.1007/s40685-019-0085-7
[12] Zhan, J. X. (2020). Covid-19 and investment--an UNCTAD research round-up of the international pandemic's effect on FDI flows and policy. *Transnational Corporations*, *27*(1), 1-3.
[13] Chinazzi, M., Davis, J. T., Ajelli, M., Gioannini, C., Litvinova, M., Merler, S., & Sun, K. (2020). The effect of travel restrictions on the spread of the 2019 novel coronavirus (COVID-19) outbreak. *Science*, *368*(6489), 395-400. https://doi.org/10.1126/science.aba9757
[14] McKibbin, W. & Fernando, R. (2020). The global macroeconomic impacts of COVID19: Seven scenarios. *Asian Economic Papers*, 1-55. https://doi.org/10.1162/asep_a_00796
[15] Sabol, G., Kiš, D., & Kalambura, S. (2022). Analysis of Trends and Challenges of a Worldwide Solid Waste Management with Emphasis on Covid-19 Pandemic - A Review. *Tehnicki vjesnik-Technical Gazette*, *29*(5), 1782-1787. https://doi.org/10.17559/TV-20220216083522
[16] Ristanović, V., Primorac, D., & Kozina, G. (2021). Operational Risk Management Using Multi-Criteria Assessment (AHP Model). *Tehnicki vjesnik-Technical Gazette*, *28*(2), 678-683. https://doi.org/10.17559/TV-20200907112351
[17] Azemi, F., Šimunović, G., Lujić, R., Tokody, D. & Mulaku, L. (2023). Green Manufacturing and Environmental Sustainability Manufacturing in Kosovo's Small and Middle Enterprises, Barriers to Implementation. *Tehnicki vjesnik-Technical Gazette*, *30* (3), 988-992. https://doi.org/10.17559/TV-20220528121801
[18] Akula, S. C. H. & Singh, P. (2021). Impact of COVID 19 on Entrepreneurship: A Systematic Review. *International Journal of eBusiness and eGovernment Studies*, *13*, 2146-0744. https://doi.org/10.34111/ijebeg.202113101
[19] Zivlak, N., Sun, Q., Lalic, B., Ciric Lalic, D., & Dong, M. (2023). Balancing Supplier Channels: An Incentive Model for Online and Offline Sales Channels. *International Journal of Simulation Modelling*, *22* (2), 245-254. https://doi.org/10.2507/IJSIMM22-2-641
[20] Krndzija, L. & Pilav-Velic, A. (2022). Innovative behavior of Small and Medium Enterprises: A comprehensive bibliometric analysis. *International Journal of Industrial Engineering and Management*, *13*(3), 158-171. https://doi.org/10.24867/IJIEM-2022-3-309
[21] Khalaf, A. T., Wei, Y., Wan, J., Abdul Kadir, S. Y., Zainol, J., Jiang, H., & Abdalla, A. N. (2023). How Did the Pandemic Affect Our Perception of Sustainability? Enlightening the Major Positive Impact on Health and the Environment. *Sustainability*, *15*(2), 892. https://doi.org/10.3390/su15020892
[22] Karabag, S. F. (2020). An unprecedented global crisis! The global, regional, national, political, economic and commercial impact of the coronavirus pandemic. *Journal of Applied Economics and Business Research*, *10*(1), 1-6.
[23] Bartik, A. W., Bertrand, M., Cullen, Z. B., Glaeser, E. L., Luca, M., & Stanton, C. T. (2020). *How are small businesses adjusting to COVID-19? Early evidence from a survey*. Bureau of Economic Research.
[24] Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of Business Research*, *116,* 199-208.
[25] Engidaw, A. E. (2022). Small businesses and their challenges during COVID-19 pandemic in developing countries: in the case of Ethiopia. *Journal of Innovation and Entrepreneurship*, *11*, 1. https://doi.org/10.1186/s13731-021-00191-3
[26] Belitski, M., Guenther, C., Kritikos, A., & Thurik, R. (2021). *Economic Effects of the COVID-19 Pandemic on Entrepreneurship and Small Businesses*. Bonn: IZA - Institute of Labor Economics.
[27] Allam, H. (2019). Entrepreneurship and Economic Growth: An Emirati Perspective. *The Journal of Developing Areas*, *53*(1), 65-78.
[28] Zhang, J., Li, H., Li, V., Xia, B., & Skitmore, M. (2020). Internal relationships of market-oriented EFQM enablers in the Chinese construction industry. *Engineering, Construction and Architectural Management*, *28*(3), 765-787.
[29] Kraus, S., Durst, S., Ferreira, Y., Veiga, P., Kailer, N., & Weinmann, A. (2022), Digital transformation in business and management research: An overview of the current status quo, *International Journal of Information Management*, *63*, 102466.
[30] Fernández-Bedoya, V., Meneses-La-Riva, M., Suyo-Vega, A., & Gago-Chávez, J. S. (2023), Entrepreneurship Research in Times of COVID-19: Experiences from South America. *Sustainability*, *15*(7), 6028. https://doi.org/10.3390/su15076028
[31] Cavalcante, A. & Savart, A. (2022). Understanding our world in a time of crisis: Mathematics education pedagogy toward financial numeracy. *Journal of Honai Math*, *5*(2), 109-126.
[32] Pavlović, A., Frank, A., Ivanišević, A., & Katić, I. (2021). The Impact of Climate Change on Sustainable Development: The Case of Vojvodina. *International Journal of Industrial Engineering and Management*, *12*(2), 141-150. https://doi.org/10.24867/IJIEM-2021-2-283
[33] Schäfer, S. & Mayer, H. (2019). Entrepreneurial ecosystems: Founding figures and research frontiers in economic geography. *Zeitschrift für Wirtschaftsgeographie*, *63*(2), 55-63. https://doi.org/10.1515/zfw-2019-0008
[34] Mónico, L., Carvalho, C., Nejati, S., Arraya, M., & Parreira, P. (2021). Entrepreneurship Education and its Influence on Higher Education Students' Entrepreneurial Intentions and Motivation in Portugal. *BAR - Brazilian Administration Review*, *18*(3), e190088.
[35] Deegan, J., Solheim, M. C. W., Jakobsen, S. E., & Isaksen, A. (2022). One coast, two systems: Regional innovation systems and entrepreneurial discovery in Western Norway. *Growth and Change*, *53*, 490-514. https://doi.org/10.1111/grow.12595
[36] Spasojević, I., Havzi, S., Stefanović, D., Ristić, S., & Marjanović, U. (2021). Research Trends and Topics in IJIEM from 2010 to 2020: A Statistical History. *International Journal of Industrial Engineering and Management*, *12*(4), 228-242. https://doi.org/10.24867/IJIEM-2021-4-290
[37] Audretsch, D., Belitski, M., & Korosteleva, J. (2021). Cultural diversity and knowledge in explaining entrepreneurship in European cities. *Small Business Economics*, *56*(2), 593-611.

[38] Ensign, P. C. (2022). Business Models and Sustainable Development Goals. *Sustainability*, *14*(5), 2558. https://doi.org/10.3390/su14052558
[39] Fernandez-Guadaño, J., Lopez-Millan, M., & Sarria-Pedroza, J. (2020). Cooperative Entrepreneurship Model for Sustainable Development. *Sustainability*, *12*(13), 5462. https://doi.org/10.3390/su12135462
[40] Murphy, D. & Stott, L. (2021). Partnerships for the Sustainable Development Goals (SDGs). *Sustainability*, *13*(2), 658.
[41] Zhou, L., Qi, Y., & You, X. (2023). Research on Time to Market and Pricing of Platform Products in a Competitive Environment. *Sustainability*, *15*(7), 5708. https://doi.org/10.3390/su15075708
[42] Ratten, V. (2021). COVID-19 and entrepreneurship: Future research directions. *COVID-19 and entrepreneurship*, *30*(2), 91-98.
[43] Zahra, S. A. (2020). International entrepreneurship in the post Covid world. *Journal of World Business*, 101143
[44] Torres, A. P., Marshall, M. I., & Sydnor, S. (2019). Does social capital pay off? The case of small business resilience after Hurricane Katrina. *Journal of Contingencies and Crisis Management*, *27*(2), 168-181.
[45] Meyer, K., Prashantham, S., & Xu, S. (2021). Entrepreneurship and the Post-COVID-19 Recovery in Emerging Economies. *Management and Organization Review*, *17*(5), 1101-1118.
[46] Dotta, V. & Munyo, I. (2019). Trade Openness and Innovation. *Innovation Journal*, *24*(2), 2-13.

Contact information:

Igor GRAIC, PhD Candidate
University of Novi Sad, Faculty of Technical Sciences,
Trg Dositeja Obradovica 6, 21000 Novi Sad, Republic of Serbia
E-mail: igraic@uns.ac.rs

Ugljesa MARJANOVIC, Associate Professor
University of Novi Sad, Faculty of Technical Sciences,
Trg Dositeja Obradovica 6, Novi Sad, Serbia
E-mail: umarjano@uns.ac.rs

Vukasin GROZDIC, Research Assistant
University of Belgrade, Faculty of Philosophy,
Čika Ljubina 18-20, 11000 Belgrade, Republic of Serbia
E-mail: vukasin.grozdic@f.bg.ac.rs

Danijela CIRIC LALIC, Assistant Professor
(Corresponding author)
University of Novi Sad, Faculty of Technical Sciences,
Trg Dositeja Obradovica 6, 21000 Novi Sad, Republic of Serbia
E-mail: danijela.ciric@uns.ac.rs

Bojan LALIC, Full Professor
University of Novi Sad, Faculty of Technical Sciences,
Trg Dositeja Obradovica 6, 21000 Novi Sad, Republic of Serbia
E-mail: blalic@uns.ac.rs