

Unveiling the Green Potential: Exploring Sustainable Value Creation in Serbia's Sharing Economy

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Abstract. *Sharing economy is experiencing significant growth worldwide driven by a decrease in consumer confidence, substantial progress in the IT sector, and the rise of novel technologies. Although the sharing economy holds promise for promoting sustainable development and providing numerous avenues for tackling practical sustainability concerns, there is not a lot of empirical researches scrutinizing the sustainability of business models within sharing economy. The aim of this study is to introduce a methodology for assessing and analysing the sustainability of sharing economy business models, providing valuable insights into the state of sustainable value creation within sharing economy enterprises specifically in the Republic of Serbia. Key sustainability factors were utilized to gauge the level of business models sustainability, and the application of the established model yielded significant findings regarding the generation of sustainable value, underscoring its relevance and encouraging policymakers to sustain sharing economy support initiatives for its inherent sustainable attributes.*

Keywords. *Sharing economy, sustainable development, sustainable value creation analysis, business models*

1 Introduction

In the dynamic landscape of the global economy, the sharing economy has emerged as a potent force shaping future development. The rise of the sharing economy, facilitated by digital platforms for peer-to-peer exchanges, has significantly altered conventional consumption behaviours. This trend reflects a move towards collaborative consumption, prioritizing resource efficiency, community involvement, and accessibility rather than ownership. By empowering people to earn from idle assets and cultivating trust between unfamiliar parties, the sharing economy delivers not only economic advantages but also promotes sustainable consumption habits and interpersonal relationships. Consequently, it influences broader societal perspectives on ownership and consumption (Porter, M. E., & Kramer, M. R., 2011; Acquier, A. et al., 2017).

According to this, many sustainable development initiatives were conducted by modern cities and countries through development and supportive access to sharing economy. Regarding the Republic of Serbia, reports D1.1. and D1.2. of project PANACEA highlight the promising outlook for the Serbian sharing economy, supported by a robust legal and policy framework conducive to its growth. However, the reports also emphasize potential challenges of sharing economy in Serbia, including a lack of interpersonal trust – a cornerstone of the sharing economy – and concerns regarding digital technologies.

While extensive researches explore business models within the sharing economy, questions related to their long-term sustainable value creation analysis remain inadequately addressed. This paper aims to fill this crucial gap by analysing the sustainable value creation potential of sharing economy business models, focusing on Serbian companies, which is presented through a comprehensive literature review and methodology description, leading to key findings and concluding remarks highlighting future research avenues.

2 Literature review

To gain deeper insight into the research context, this section of the paper offers a concise review of literature pertaining to the concepts and attributes of the sharing economy, the various business models employed within it, and conceptual frameworks utilized to gauge the sustainable value generated by these models.

2.1 Understanding the definition and concept of sharing economy

The concept of the sharing economy, characterized by the collaborative consumption of underutilized resources facilitated by online platforms, has sparked considerable debate within academic circles. Divergences in defining this multifaceted phenomenon have emerged, leading to nuanced perspectives on its impact and implications.

Proponents of a narrower definition, exemplified by *Cockayne* (2016), *Benkler* (2004) and *Frenken & Schor* (2017), emphasize the optimization of resource utilization through online platforms. In their view, platforms like Uber, which solely aim at value capture through a professional taxi service, fall outside the boundaries of the true sharing economy due to their lack of genuine resource-sharing (*Acquier et al.*, 2019). However, advocates of a broader definition, including *Lessig* (2008), *Habibi et al.* (2016) and *Munoz & Cohen* (2017) encompass both business-to-peer and peer-to-peer arrangements, integrating both non-market and market-driven mechanisms. This expansive definition allows platforms like Uber to be considered part of the sharing economy, albeit with potential concerns (*Acquier, A. et al.* 2019).

Despite the challenges of interpersonal trust and legal issues, the sharing economy continues to experience significant growth and demonstrably offers various socio-economic benefits. However, there are also numerous critics such as *Belk* (2014) who labels it "pseudo-sharing," highlighting the potential for exploitation and commodification disguised as collaborative consumption. Critics further denounce the "parasitic development logic" of platforms, which they see as extending neoliberal practices into unregulated and potentially exploitative labour markets (*Slee*, 2015).

Key participants in the sharing economy include users, platforms and resource/capacity providers. However, in a broader sense, the sharing economy includes additional stakeholders such as partners, government institutions, competitors and the wider community, each driven by different motives for participation (*Zhu, X., & Liu, K.*, 2021). Moving forward, the varying definitions and perspectives surrounding the sharing economy reflect its complex and evolving nature. While debates persist regarding its boundaries and impacts, it is evident that the sharing economy is a substantial both social and economic phenomenon, carrying implications for diverse stakeholders.

2.2 Business models of sharing economy

The conceptualization and dissemination of sharing economy business models are characterized by significant variability. In accordance with findings from the PANACEA project and the scholarly contributions of *Treľová, S.* (2021), business models within this domain can be categorized as:

- those in which movable or immovable property is assigned for a certain period of time,
- those in which property-based services are provided, which means that property ownership with wine enables the delivery of services and
- business models in which individuals provide services based on their knowledge and skills.

A defining characteristic of the sharing economy is its inclusive nature, encompassing both profit-driven endeavours and non-profit initiatives. Consequently, *Ritter M. & Schanz H.* (2019) delineate sharing economy business models based on their mechanisms for creating and capturing value into the following classifications: Subscription-based models, Unlimited platforms, Singular transaction models and Commission-based platforms.

Furthermore, *Acquier, A. et al* (2019) contribute to this discourse by presenting an additional categorization based on the methods of creating and capturing value. Based on this division, it can be distinguish four type of sharing economy business models, these are: *Commoners* (unlimited access to public resources and capacities), *Mission-driven platforms* (intermediaries between peers, serving to

advance societal causes), *Shared infrastructure providers* (ventures oriented on profit that generate value by providing paid and impermanent access to a centralized base of branded resources) and *Matchmakers* (decentralized market transactions by connecting peers) (Acquier, A., Carbone, V., & Massé, D., 2019).

In summary, the sharing economy encompasses a diverse array of business models, each characterized by unique approaches to value creation and capture, ranging from temporal property assignments to skill-based service provision and beyond.

2.3 Sustainable value creation factors of business models in sharing economy

The conventional paradigm of business models traditionally emphasizes value creation solely within the realm of economic gains. However, as environmental concerns take on greater significance, there emerges a paradigm shift wherein value creation is reconceptualized through the lens of sustainability. This entails considering not only economic benefits but also social and environmental dimensions which together builds the famous triple-bottom model of sustainability (Sadiq, M. et al., 2023).

The business models inherent in the sharing economy exemplify a notable instance of sustainable value creation owing to their inherent characteristics (Laukkanen, M., & Tura, N., 2020). Nonetheless, substantiating this claim from environmental and social perspectives beyond mere economic metrics presents a challenge. One approach to addressing this challenge is through sustainability evaluation, which involves assessing the sustainability implications of various initiatives, encompassing policies, plans, programs, projects, laws, or ongoing practices (Pope, J. et al., 2004).

An extensive examination of the current academic literature regarding the sustainable value creation within sharing economy business models culminates in the development of many conceptual framework, and the adapted framework selected for the purposes of conducting this research is shown in Figure 1. This framework serves as a blueprint for gauging the potential for sustainable value creation. Moreover, to ensure the framework's comprehensiveness, it is cross-referenced with all United Nations Sustainable Development Goals, which broadly tackle sustainability challenges on a global scale. By encapsulating diverse facets of value creation across multiple dimensions of sustainability, this framework furnishes a foundational tool designed to assess the sustainability of sharing economy business models.

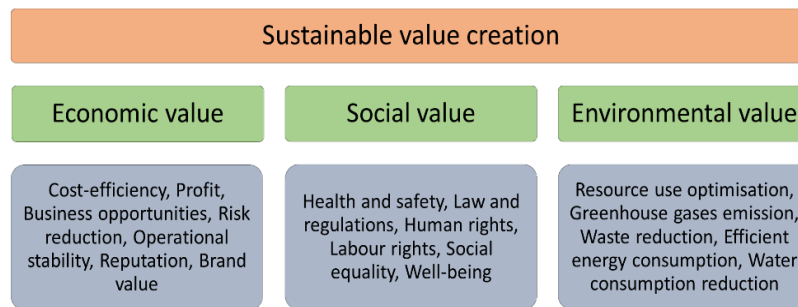


Figure 1. Framework for sustainable value creation assessment of sharing economy business models (Sources: Daunoriené, A. et al. 2015; Laukkanen, M. & Tura, N. 2020)

3 Research methodology

The data collection took place in Serbia in February 2024, employing an e-survey which is recognized for its efficacy in data acquisition, owing to its capacity for transmitting extensive information and facilitating swift response cycles (Stanimirovic et al., 2023). The survey was sent to all sharing economy companies operating in Serbia that were mapped in the PANACEA project reports.

Comprising three distinct constructs, the survey was meticulously designed to capture pertinent information pertaining to companies operating within the sharing economy paradigm. The first construct delineates fundamental details about the surveyed companies' business models (type of business and capturing value models) which is aligned with the findings of the literature review. The second construct evaluates the surveyed companies' contribution to UN sustainable development goals, with questions

crafted from relevant literature, including the work of *Sadiq, M. et al. (2023)*. The third construct focuses on understanding how these companies generate sustainable value within their business models, aligning its questions with factors outlined in the adapted conceptual framework shown in Figure 1.

Respondents filled out the questionnaire anonymously via the MS Forms platform. Subsequently, the collected data were subjected to rigorous analysis using MS Excel radar chart to analyse and visualize the collected data based on the dimensions of conceptual framework explained in the literature review. Furthermore, sustainability of business models was analysed in two ways, firstly according to the type of business model and secondly according to their affiliation to the industry sector.

4 Results

As per the findings of the PANACEA project, the Republic of Serbia hosts a diverse array of more than 50 sharing economy enterprises. It's important to note that this roster is not exhaustive but rather offers a snapshot of the current landscape, reflective of the dynamic and burgeoning nature of the sharing economy in Serbia. Predominantly, notable number of players in Serbian sharing economy operates in the accommodation and transportation sectors include Airbnb, the domestic equivalent of Uber known as CarGo, and the ride-sharing platform BlaBlaCar (PANACEA, 2022).

The survey, tailored specifically for this research, was distributed to all sharing economy enterprises outlined in the D.2 report of project PANACEA, providing comprehensive coverage of the targeted economic landscape. However, the responses received were garnered from a subset of companies, totalling 27 in number. The outcomes of the assessment pertaining to analysed business models sustainable value creation are elucidated in Figure 2.

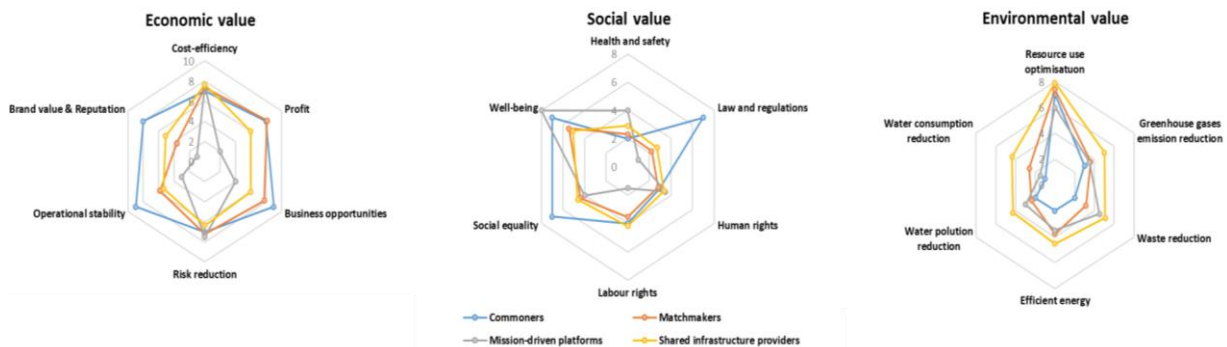


Figure 2. Results of business models sustainable value creation assessment (Source: Authors' work)

Within the examined sample, a substantial proportion of companies in Serbia, amounting to 48%, adopt the *Matchmakers* model, while 40% opt for the *Shared Infrastructure Providers* model. In contrast, the utilization of the *Commoners* and *Mission-driven Platforms* models is less prevalent, suggesting a predominant emphasis among sharing economy enterprises in Serbia on fostering economic utility. This observation aligns to some extent with the findings of the PANACEA project reports. In addition, sharing economy companies in Serbia operate under commission-based value capturing schemes, with unlimited platforms schemes being the least favoured. Subscription and transactional models are employed with equal frequency of 22%.

5 Discussion and conclusion

Based on the presented data, a clear trend emerges wherein business entities implementing the *Commoners* model exhibit the highest level of sustainable value creation, closely followed by those employing the *Matchmakers* model, which yields a similar score. Conversely, companies operating under the *Mission-driven Platforms* model tend to achieve the lowest sustainable value creation. Notably, significant economic value is realized across all models, particularly in terms of Cost-efficiency, Profit, Business opportunities, and Risk reduction factors. Within the economic value sphere, the *Commoners* and *Matchmakers* models demonstrate leadership, whereas *Shared Infrastructure*

Providers yield slightly lower results, and *Mission-driven Platforms* generate the least economic value. These findings corroborate earlier research conducted by *Acquier, A. et al. (2019)* and *Laukkanen, M. et al. (2020)*.

When considering the generation of social value, firms that adopt the *Commoners* model exhibit notable performance, while other models generally achieve an average rating of around 3.5 in this domain. Social equality and well-being are the most realized factors. Conversely, regarding environmental value creation, *Shared Infrastructure Providers* achieve the highest results, followed by *Mission-driven Platforms* and *Matchmakers*, whereas *Commoners* demonstrate the lowest performance. Factor of optimal resource utilization garners the highest score of 7.5, while other factors receive scores ranging from 3 to 4. These findings echo those of the *Laukkanen, M. et al. (2020)* and *Sadiq, M. et al. (2023)*, yet this study offers a novel perspective by analysing value creation not only according to business models but also across operational sectors, thereby aligning with the UN's sustainable development goals.

Following the mentioned, sharing economy companies in Serbia predominantly generate economic value across operational sectors, followed by social and environmental ones. Notably, the finance sector contributes the most to economic value factors, while the transport and accommodation sectors play pivotal roles in fostering social and environmental value factors. Overall, the accommodation and transport sectors appear as leaders in terms of sustainable value creation, while the factor of optimal resources use stands out most among the representatives of all operational sectors, which is in accordance with the essential ethos of the sharing economy.

Moreover, all findings presented are fortified by an examination of the sharing economy's impact on achieving the UN Sustainable Development Goals (SDGs) within Serbia. Among the SDGs, the analysis reveals that sharing economy companies in Serbia mostly contributes to certain goals, such as SDG 8 (Decent work and economic growth), SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable cities and communities) and SDG 17 (Partnership for the goals), whereas other goals, notably those related to SDG 2 (Zero hunger), SDG 14 (Life below water) and SDG 15 (Life on land) are less achieved by these companies which is in accordance with findings of *Sadiq, M. et al. (2023)* and *Petrović et al. (2022)*.

To conclude, conducting this research, a clear trend emerges wherein various business models implemented in Serbia demonstrate sustainable value creation. Considering the predominant utilization of *Matchmakers* model by the majority of Serbian sharing economy enterprises, notably exemplified by prominent entities like AirBnB, BlaBlaCar, and CarGO, it can be inferred that the sharing economy in Serbia fosters sustainable value creation especially in economic and social area. Despite the developmental phase of the Sharing Economy in Serbia, significant strides are anticipated in the future. To realize this potential, country decision makers have to conduct greater supportive incentives for domestic start-ups in less represented operational sectors of sharing economy, particularly those embracing the *Commoners* models which generates most sustainable value and which is least utilised by enterprises from Serbia. Also, strategic framework of sharing economy in Serbia should consider fostering initiatives of creating a favourable business environment, and market regulation and initiatives that could increase trust and knowledge among citizens in the Sharing Economy domain in order to address the challenges of sharing economy discovered by project PANACEA.

Finally, it is worth noting the limitations of this research, suggesting that future research efforts should focus on overcoming these challenges. These limitations are: a limited sample within Serbia and potential bias in the subjective assessments of company representatives, but also limitations that arose due to the reduced space for the research results presentation, such as: a limited literature review, a reduced number of charts and diagrams results presentations, and a reduced number of more specific details about the Serbian sharing economy context in order to deepen the reader's understanding of local challenges and opportunities and to broaden the discussion on the implications of paper's findings for policy and practice, particularly in addressing identified sustainability challenges and opportunities.

References

- Acquier, A., Carbone, V., & Massé, D. (2019). How to create value (s) in the sharing economy: Business models, scalability, and sustainability. *Technology Innovation Management Review*, 9(2).

- Acquier, A., Daudigeos, T., & Pinkse, J. (2017). Promises and Paradoxes of the Sharing Economy: An Organizing Framework. *Technological Forecasting and Social Change*, 125, 1–10.
- Belk, R. (2014). Sharing versus Pseudo-Sharing in Web 2.0. *Anthropologist*, 18(1): 7–23.
- Benkler, Y. (2004). Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production. *The Yale Law Journal*, 114(2), 273–358.
- Cockayne, D. G. (2016). Sharing and Neoliberal Discourse: The Economic Function of Sharing in the Digital On-Demand Economy. *Geoforum*, 77, 73–82.
- Daunorienė, A., Drakšaitė, A., Snieška, V., & Valodkienė, G. (2015). Evaluating sustainability of sharing economy business models. *Procedia-Social and Behavioral Sciences*, 213, 836-841.
- Frenken, K., & Schor, J. (2017). Putting the Sharing Economy into Perspective. *Environmental Innovation and Societal Transitions*, 23: 3–10. <https://doi.org/10.1016/j.eist.2017.01.003>.
- Habibi, M. R., Kim, A., & Laroche, M. . (2016). From Sharing to Exchange: An Extended Framework of Dual Modes of Collaborative Nonownership Consumption. *Journal of the Association for Consumer Research*, 1(2): 277–294.
- Jeremić, V, Maričić M, Marković, A., Petrović, N., Živojinović, T., Petrović, M., Bojković N., Kuč, V. & Veljković, S. (2022). Ekonomija deljenja - karakteristike, poslovni modeli, primeri platformi i razvojni izazovi. Belgrade: Setting foundation for caPACity buildiNg of shAring Community in SERbiA - PANACEA.
- Jeremić, V, Maričić M, Marković, A., Petrović, N., Živojinović, T., Petrović, M., Bojković N., Kuč, V. & Veljković, S. (2022). Mapiranje zajednice ekonomije deljenja u srbiji: korisnici, platforme i provajderi. Belgrade: Setting foundation for caPACity buildiNg of shAring Community in SERbiA – PANACEA.
- Laukkanen, M., & Tura, N. (2020). The potential of sharing economy business models for sustainable value creation. *Journal of Cleaner production*, 253, 120004.
- Lessig, L. (2008). *Remix: Making Art and Commerce Thrive in the Hybrid Economy*. London: Penguin Press.
- Muñoz, P., & Cohen, B. . (2017). Mapping out the Sharing Economy: A Configurational Approach to Sharing Business Modeling. *Technological Forecasting and Social Change*, 125, 21–37.
- Petrović, N., Jeremić, V., & Ćirović, M. Sharing economy and sustainable development goals. Book of abstracts XVII International Symposium Sustainable Business Management and Digital Transformation: Challenges and Opportunities in the Post-COVID Era, (pp. 120-122). Belgrade, Serbia, 11-14. June: Faculty of Organizational Sciences, University of Belgrade.
- Pope, J., Annandale, D., & Morrison-Saunders, A. (2004). Conceptualising sustainability assessment. *Environmental impact assessment review*, 24, 595-616.
- Porter, M. E., & Kramer, M. R. . (2011). Creating Shared Value . *Harvard Business Review*, 89(1/2): 62–77.
- Ritter M & Schanz H., (2019). The sharing economy: A comprehensive business model framework. *Journal of Cleaner Production*, 213, 320-331.
- Sadiq, M., Moslehpour, M., Qiu, R., Hieu, V. M., Duong, K. D., & Ngo, T. Q. (2023). Sharing economy benefits and sustainable development goals: Empirical evidence from the transportation industry of Vietnam. *Journal of Innovation & Knowledge*, 8(1), 100290.
- Slee, T. (2015). *What's Yours Is Mine: Against the Sharing Economy*. New York: OR Books.
- Stanimirovic, P., Borozan, T., Radojicic, M., & Tomic, A. D. (2023, July). Project Management Software Tools—One Step Closer to UN Sustainable Development Goals. In 2023 3rd International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME) (pp. 1-5). IEEE.
- Treľová, S. (2021). Models of work in collaborative economy and legislative challenges. In *SHS Web of Conferences* (Vol. 92). EDP Sciences.
- Zhu, X., & Liu, K. (2021). A systematic review and future directions of the sharing economy: business models, operational insights and environment-based utilities. *Journal of Cleaner Production*, 290, 125209.