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Comparative Analysis of Lidl's Logistics Center in Nova Pazova with Leading European Logistics Centers

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Abstract

This study examines the positioning of Lidl's distribution center in Nova Pazova in relation to European logistics standards through systematic comparison with five representative facilities across different geographical environments. A qualitative-quantitative approach was applied, combining analysis of infrastructural characteristics, operational models, and technological implementations. Empirical evidence indicates that retailoriented facilities compensate for dimensional limitations through the implementation of advanced management systems and sector-adapted technologies. The 45,000 m² center achieves operational productivity through pick-byvoice technology and zonal temperature management that enable performance comparable to facilities significantly larger capacities. Multimodal limitations are offset by the speed of distribution cycles and flexibility in adapting to market demands. The analysis reveals a trend toward functionally differentiated logistics solutions in the Southeast European region that integrate economic imperatives with sustainable business requirements. Achieving energy efficiency and environmental certification demonstrates compliance with the European regulatory framework. The research confirms that specialized approaches can generate competitive independently of absolute capacities through optimization of targeted functionalities.

Keywords: Logistics Center, Comparison, Lidl, Technological Innovations, Sustainability

Introduction

The contemporary retail sector is undergoing a revolutionary transformation that fundamentally alters the organizing principles of logistics processes [1, 2]. Traditional models are giving way to sophisticated network structures that enable flexibility and adaptability to new market demands [3]. Logistics has evolved from simple activities comprising transportation and warehousing to strategic functions that determine enterprise competitiveness in the global marketplace [4]. This evolution has been driven by the integration of cutting-edge digital technologies, automation, and artificial intelligence [5, 6]. The result is the creation of adaptive logistics systems that not only respond to growing demands but also anticipate them, enabling enterprises to stay one step ahead of their customers' expectations [7, 8].

Changes in logistics systems in the digital era are manifested through the application of advanced technologies such as IoT, blockchain, and robotics ^[9, 10, 11]. These technologies enable continuous monitoring of material flows, real-time route optimization, and proactive inventory management ^[12, 13]. Digital transformation also entails redefining relationships between supply chain participants through platforms for collaboration and data exchange ^[14, 15]. Supply chain efficiency represents a key factor determining enterprises' ability to meet all the requirements of modern consumers ^[4, 16]. Requirements regarding product availability, delivery speed, and pricing set high standards that can only be met by the most optimally configured logistics centers ^[2, 17]. Previous research indicates that enterprises that have successfully optimized their logistics processes achieve significantly higher profitability and a substantially increased market share relative to their competitors ^[4, 16].

The transition from conventional storage facilities to intelligent logistics hubs marks a fundamental paradigm shift in distribution network architecture [11]. Modern logistics centers operate as integrated multifunctional ecosystems that leverage sophisticated technological frameworks to streamline operations across the entire goods flow spectrum, from initial receipt through final dispatch [11, 16]. This evolutionary transformation yields multidimensional advantages: Enhanced operational

throughput via process automation and systematic optimization, significant cost reduction through strategic resource deployment, and elevated service standards achieved through comprehensive oversight and precision control mechanisms throughout all distribution phases [11, 17]. Seasonal fluctuations, marketing promotions, and sales campaigns further complicate the already complex process of planning and executing logistics activities [18]. With such demands, logistics management must develop the ability to rapidly adapt to these unpredictable changes while maintaining efficiency and service quality [19, 20].

Contemporary enterprises face a paramount strategic dilemma: the necessity to simultaneously pursue three inherently conflicting objectives-operational cost optimization, delivery time compression, and environmental impact mitigation [21, 22]. These competing imperatives create inherent tensions that demand the deployment of cutting-edge optimization frameworks and advanced multi-criteria decision-making methodologies. Successfully navigating this complex challenge requires an integrated approach that synthesizes economic viability, operational excellence, and ecological responsibility into a cohesive strategic framework.

The Southeast European region is characterized by specificities in logistics infrastructure development conditioned by geographical, economic, and regulatory factors. The fragmented nature of regional markets, heterogeneous regulatory frameworks, and limited interoperability of existing transport systems create significant barriers to developing integrated regional logistics networks. Infrastructure investments and standards harmonization represent key factors for improving the region's logistics competitiveness.

The contemporary logistics sector faces a fundamental strategic dilemma between the trend toward specialization of logistics centers for specific product categories and the imperative of multimodal integration of different transport modes. Specialized centers enable process optimization for specific requirements, while multimodal integration increases flexibility and enables economies of scale. Finding the optimal balance between these approaches represents a key strategic choice.

Research Significance

Scientific significance: The study enriches the theoretical foundation of logistics studies through the creation of analytical models for assessing distribution network efficiency and classifying organizational structures of logistics facilities.

Practical significance: The study provides a practical guide for investment decisions of logistics companies in Southeast Europe, including recommendations for technological improvements and business process optimization.

Social significance: Improving logistics capacities stimulates regional development through new job creation, investor attraction, and lower consumer prices, along with ecological benefits.

Methodological significance: The research introduces innovative techniques for performance measurement and ROI analysis of logistics investments, applicable in various contexts

The complexity of contemporary logistics systems and growing demands for distribution process optimization necessitate a comprehensive analysis of logistics center

performance in the context of regional and European competitiveness. The fundamental research question focuses on positioning a specific logistics center in relation to established European standards and industry best practices. Central research question: How does Lidl's logistics center in Nova Pazova position itself relative to leading European logistics centers in terms of operational efficiency, technological sophistication, and strategic functionality? Specific research questions:

- Which technological innovations (automation, digitalization, artificial intelligence) represent key determinants of contemporary logistics centers' competitiveness, and to what extent have they been implemented in the analyzed facility?
- How do regional specificities of Southeast Europe (geographical position, infrastructural characteristics, regulatory framework, market structure) influence logistics system design and operational performance compared to Western European standards?
- Which organizational, technological, and operational factors enable specialized logistics centers to achieve superior performance compared to large multimodal distribution platforms regarding specific product categories and market segments?

Research objective

The main objective of this study is a comprehensive comparative analysis of Lidl Serbia's logistics center in Nova Pazova with leading European logistics centers, focusing on identifying key competitiveness factors, technological innovations, and operational practices that characterize contemporary logistics systems.

Specifically, the research aims to:

- Position Lidl's center within the context of European logistics standards through systematic comparison of infrastructural capacities, technological solutions, and operational performance,
- Identify comparative advantages of specialized retail distribution centers relative to multimodal logistics platforms,
- Assess the efficiency of implemented technological innovations (pick-by-voice system, SAP integration, temperature control) and their impact on operational performance.
- Analyze sustainability models and energy efficiency as factors of long-term competitiveness in the logistics sector,
- Define best practices that can be implemented in the regional logistics systems of Southeast Europe.

The study also aims to contribute to scientific discourse on the evolution of logistics systems toward specialization and technological sophistication, as well as to provide practical recommendations for improving logistics operations in the context of emerging markets.

Methodology Research Approach

The research is conceived as an exploratory-comparative case study that combines quantitative and qualitative analytical methods. This approach enables an in-depth understanding of logistics system specificities through systematic comparison of performance, structures, and operational characteristics of different types of distribution centers.

The study is structured as a multiple comparative case design where each logistics center represents a unit of analysis. This approach enables identification of patterns, differences, and best practices through cross-case analysis, which is particularly relevant for understanding the impact of contextual factors on logistics system performance.

Units of Analysis

Primary case: Lidl logistics center in Nova Pazova. Reason for selection:

- Represents the newest regional development in specialized retail logistics,
- Availability of detailed operational data,
- Possibility of real-time monitoring of advanced technology implementation.

Comparative cases:

- Bremen freight transport terminal (Germany) paradigm of multimodal logistics,
- Freight Village Vorsino (Russia) continental logistics hub.
- LDCT Lille Dourges (France) trimodal continental terminal.
- Eskilstuna logistics center (Sweden) Nordic model of high automation,
- Yana Sofia (Bulgaria) regional transit hub.

Lidl Serbia Logistics Center: Integrated Approach to Supply Chain Management

Lidl Serbia established a logistics center in Nova Pazova in 2018 as a strategic hub for supplying its retail network. The €55 million investment resulted in a 45,000 m² facility with a capacity of 30,000 pallet positions and 120 loading/unloading docks.

The center implements advanced technological solutions based on the SAP platform that integrates all logistics processes ^[23]. The key innovation is the "pick-by-voice" system for order picking that achieves 99% accuracy through the elimination of paper documentation and enabling complete worker mobility ^[24]. Temperature management is organized through five different zones, including a specialized zone for chocolate products at +18°C

Operational processes are structured through four key phases. Goods receiving is conducted at 120 docks through systematic quantitative and qualitative control. Coordination with transport operators is optimized by a scheduling system that minimizes waiting time [25]. Storage is organized according to zonal picking principles and ABC analysis, where products are categorized by value and turnover frequency. The "just-in-time" system balances storage costs with service level requirements. Picking has been transformed through voice guidance implementation that hands-free operation and dynamic optimization through algorithms integrated with the warehouse management system. Dispatch coordinates multiple scheduled orders through load optimization algorithms and direct cross-docking for certain product categories.

The logistics center operationally supplies approximately 100 retail outlets. It holds LEED Gold certification, resulting in 32% energy consumption reduction and 20% water consumption reduction compared to conventional facilities.

The geographical location, 30 km from Belgrade, provides optimal connectivity with main transportation routes and efficient distribution to all market segments. Integration with the international Lidl network enables process standardization and best practice transfer from established markets.

Identified challenges include coordination with external partners, scalability in the context of planned expansions, and attracting specialized personnel for advanced technology management. Supply chain resilience is enhanced through a diversified supplier base and flexible distribution capabilities.

Lidl's logistics center in Nova Pazova represents a model of an integrated supply chain management approach that combines technological innovations, operational efficiency, and sustainable practices. Implementation of voice picking, optimized processes, and ecological orientation position the center as a benchmark in the regional logistics sector, demonstrating how a strategic approach to technology and processes can result in competitive advantages in a dynamic retail environment.

Characteristics of European Logistics Centers Bremen Freight Transport Terminal - Multimodal Logistics Hub

In geological terms, the Bremen freight transport center has a perfect position for goods flow. Three modes of transport converge there: road, rail, and waterway, thereby encouraging voluntary cooperation between different carriers and service providers. An example of this is the significant reduction in the number of freight road vehicle trips within the country's interior.

Bremen represents a multimodal logistics transport terminal in Northern Europe. Three modes of transport converge there: road, rail, and waterway. Bremen Cargo Distribution Center covers approximately 1.5 million square meters, making it the largest freight distribution center in Germany and the second largest in Europe. The total logistics area within the GVZ exceeds 1.3 million square meters.

The terminal has a 2.1-kilometer coastline and is equipped with modern technology for handling almost all types of conventional cargo. The center possesses a road-rail terminal located in immediate proximity to Bremen Airport, only 6 km away, making it accessible for urgent air freight. Bremen's strategic position enables connection with key European ports and access to continental markets through efficient multimodal transport links. Two large logistics centers near Bremen freight village provide a comprehensive spectrum of logistics services for the automotive industry, processing components from manufacturers and approximately 300 different suppliers.

Freight Village Vorsino - Continental Hub in Russia

The multimodal transport-logistics center of federal format "Freight Village Vorsino" extends over 570 hectares, located in Vorsino Industrial Park along federal highway M3, 70 kilometers from MKAD. Vnukovo Airport is only 45 km away, and 67 km from Moscow, with direct access to road, rail, and air transport. For industrial needs, approximately 400 hectares of the logistics center area is utilized, while the remaining area is partly designated for sales and partly serves as space for the food processing industry. This logistics center possesses 7 railway tracks, each ranging from 750 to 1,620 meters in length.

In July, a cooperation was signed between X5 Retail Group and Freight Village RU for locating a distribution center for the "Pyaterochka" retail chain, indicating the growing significance of this complex in the Russian retail sector.

Vorsino's geographical position enables access to the Moscow region as Russia's largest consumer market, while railway connectivity opens perspectives for integration into Eurasian transport corridors. The center represents a significant example of Russian logistics infrastructure modernization adapted to continental distances and Russian market specificities.

Logistics Centers in France, Sweden, and Bulgaria - Regional Specificities

Pharmaceutical logistics centers, such as the case with Lilly pharmacy in France, located in Dourges, Nord Pas de Calais region, are characterized by specific requirements for maintaining controlled temperatures, process validation, and compliance with Good Distribution Practice (GDP) standards. These centers typically have smaller storage areas compared to generic retail distribution centers, but with significantly higher operationalization costs per square meter due to special regulatory requirements. It is situated at the traffic junction of European corridors (from the UK to Eastern Europe and from northern ports to Southern Europe). The multimodal terminal occupies 600,000 m² and offers exceptional services, possessing 14 railway tracks and a river port 250 m in length.

The Scandinavian approach to logistics, as in the case of Eskilstuna in Sweden, traditionally emphasizes high levels of automation, energy efficiency, and integration of renewable energy sources. Climate conditions in Sweden impose additional requirements for facility design, including reinforced thermal insulation and systems adapted for operation in low temperatures. The logistics center is 380 km from Gothenburg, located in the city of Eskilstuna, and covers 83,000 m². It possesses 4 railway tracks of 720 m in length.

Bulgarian logistics centers, including Yana Sofia, are positioned as regional distribution hubs that combine the advantages of EU membership with competitive operational costs. The strategic position in the Balkans enables access to Southeast European markets and represents an important link in connecting Western European markets with Middle Eastern markets.

Comparative Analysis of Lidl's Logistics Center in Nova Pazova with Leading European Logistics Centers

Contemporary logistics represents a critical component of global business operations, where supply chain success largely depends on the efficiency of distribution centers as key nodes in the network. This study analyzes six significant logistics facilities in different geographical and economic environments across Europe: Lidl logistics center in Nova Pazova (Serbia), Bremen freight transport terminal (Germany), Freight Village Vorsino (Russia), and logistics centers in France, Sweden, and Bulgaria. The analysis aims to identify key differentiation factors in design, capacity, technological equipment, and operational strategies of these facilities.

Analysis of contemporary logistics systems in Europe reveals significant differences in approach, capacities, and technological solutions among different types of distribution centers. Lidl's logistics center in Nova Pazova, with its

45,000 m² and capacity of 30,000 pallets, represents a characteristic example of a specialized retail distribution center that differs significantly from multifunctional logistics platforms across Europe. Unlike large multimodal hubs such as Bremen freight transport center with 160,000 m² that integrates three modes of transport, or the gigantic Freight Village Vorsino in Russia spanning an incredible 570 ha, Lidl's center demonstrates a focused approach optimized exclusively for the discount retail chain's needs [26, 27]

Regional specificities of European logistics centers clearly reflect different economic and geographical conditions. Western Europe, led by the Benelux region, dominates with three markets at the top of the most attractive locations list - Venlo, Antwerp-Brussels, and Rotterdam, while Antwerp, Rotterdam, and Düsseldorf stand out as the continent's best logistics hubs [28]. LDCT Lille Dourges in France, as a trimodal continental terminal with 14 railway tracks and a river port, illustrates advanced transport mode integration characteristic of Western European centers. In contrast, centers in Southeast Europe, such as Yana Sofia in Bulgaria, focus on transit function at the intersection of European corridors, reflecting the region's strategic position as a land bridge between Asia and Europe [29].

Technological sophistication represents a key differentiating factor among contemporary logistics centers. Lidl's center stands out with the implementation of a "pick by voice" system with impressive 99% accuracy, positioning it technologically more advanced than many traditional European centers. This automation, supported by the SAP management system, enables efficiency that surpasses conventional picking approaches. Global operators like Amazon, with its 98 distribution centers in Europe, implement even more advanced solutions, including AI optimization and automated sorting, while DHL, as the largest courier by revenue (\$85 billion in 2020), focuses on speed and international connectivity [30]. However, Lidl's specialization for retail needs enables operational efficiency that often exceeds generic logistics platforms.

The sustainability issue is becoming an increasingly significant factor in evaluating logistics performance. Lidl's LEED Gold certification achieved 32% energy consumption reduction and 20% water consumption reduction, positioning this center among the most environmentally responsible facilities in the Southeast European region. Additionally, five temperature zones, including a specialized chamber for chocolate products at +18°C, as well as a continuous temperature monitoring system during transport, demonstrate technological sophistication adapted to retail industry specificities. These characteristics create a sharp contrast with traditional centers like Interporto Bologna, which spans 200 ha but primarily functions as a classic multimodal platform without advanced temperature control systems [31].

Multimodal connectivity remains a key limitation of Lidl's model compared to large European centers. While Bremen enables integration of road-rail and water transport with direct access to port and airport, and Eskilstuna in Sweden operates with four railway tracks totaling 720 m in length, Lidl's center primarily relies on road transport. This limitation reflects a strategic choice to focus on speed and flexibility of retail distribution, where daily store supply is prioritized over multimodal efficiency. A similar situation characterizes other specialized retail centers across Europe,

indicating a systemic difference between market-driven retail logistics and classic multi-user platforms.

Operational performance of Lidl's center illustrates evolution toward customer-centric logistics characteristic of contemporary retail chains. Daily distribution ensuring product freshness, continuous temperature monitoring, and special boxes maintaining temperature for up to 24 hours represent advanced solutions adapted to the food retail sector's specificities. These characteristics, combined with SAP technology and automated packaging waste sorting, demonstrate a systematic supply chain optimization approach that often exceeds the flexibility of large multiuser centers. However, the monopolistic nature of operations and regional reach represent structural limitations compared to globally oriented centers, such as UPS's integrated supply chain solutions [32].

Comparative analysis reveals that Lidl's logistics center in Nova Pazova represents a successful adaptation of contemporary European logistics standards to specific retail sector needs in the Southeast European region. While lagging behind large centers like Bremen in size and multimodal connectivity, the center stands out through technological innovations, operational efficiency specifically designed for retail needs, and high sustainability standards. This model suggests future trends in European specialization where and technological sophistication are increasingly emphasized as key competitiveness factors, surpassing size and multimodal capacities, which have significant implications for logistics infrastructure development in emerging market regions.

Conclusion

Analysis of Lidl's logistics center positioning within the context of European logistics infrastructure reveals fundamental transformations in the approach to distribution system design. The center in Nova Pazova illustrates the trend toward functionally specialized facilities that prioritize precision over absolute Technological innovations such as voice-guided picking and temperature zone integration enable the achievement of competitive performance despite limited multimodal connectivity. This approach signals a redefinition of the logistics efficiency concept where traditional indicators such as area and number of docks are supplemented by service quality metrics, response speed, and adaptability to market demands.

Regional specificities of Southeast Europe create unique opportunities for implementing logistics models that combine cost-effectiveness with technological advancement. Unlike Western European mega-centers that competitiveness on intermodal integration, facilities in the advantages comparative region develop specialization and innovative sustainability approaches. LEED Gold certification and energy optimization represent strategic positioning toward requirements imposed by the European Union's Green Deal, which is becoming a determining factor for future logistics infrastructure investments.

References

 Jing H, Fan Y. Digital Transformation, Supply Chain Integration and Supply Chain Performance: Evidence From Chinese Manufacturing Listed Firms. Sage Open. 2024; 14(3):21582440241281616. Doi:

- 10.1177/21582440241281616
- 2. He J, Fan M, Fan Y. Digital transformation and supply chain efficiency improvement: An empirical study from a-share listed companies in China. PLoS One. 2024; 19(4):e0302133. Doi: https://doi.org/10.1371/journal.pone.0302133
- 3. Sundarakani B, Manikas I, Gunasekaran A. The role of digital transformation in achieving sustainable supply chain management in Industry 4.0: An editorial review perspective. International Journal of Logistics Research and Applications. 2024; 27(6):843-851. Doi: https://doi.org/10.1080/13675567.2024.2332123
- Zhang Z, Mishra N, Wulandhari NBI, Gölgeci I, Singh A. Diffusion of Digital Transformation Initiatives in Multi-Tier Supply Chains: The Double Agency Role of Tier-1 Suppliers. International Journal of Production Economics. 2025; 109728. Doi: https://doi.org/10.1016/j.ijpe.2025.109728
- Holloway S. Digital Transformation in Supply Chain Management: A Systematic Literature Review of Trends and Applications, 2024. Doi: https://doi.org/10.20944/preprints202411.2423.v1
- 6. Özkanlısoy Ö, Akkartal E. Digital transformation in supply chains: Current applications, contributions and challenges. Business & Management Studies: An International Journal. 2021; 9(1):32-55. Doi: https://doi.org/10.15295/bmij.v9i1.1673
- 7. Idrissi ZK, Lachgar M, Hrimech H. Blockchain, IoT and AI in logistics and transportation: A systematic review. Transport Economics and Management. 2024; 2:275-285. Doi: https://doi.org/10.1016/j.team.2024.09.002
- 8. Sandner P, Gross J, Richter R. Convergence of blockchain, IoT, and AI. Frontiers in Blockchain. 2020; 3:522600. Doi: https://doi.org/10.3389/fbloc.2020.522600
- Rahman MH, Menezes BC, Baldacci R. Exploring the role of blockchain technology, warehouse automation, smart routing, and cloud computing in logistics performance. Production & Manufacturing Research. 2024; 12(1):2393614. Doi: https://doi.org/10.1080/21693277.2024.2393614
- Charles V, Emrouznejad A, Gherman T. A critical analysis of the integration of blockchain and artificial intelligence for supply chain. Annals of Operations Research. 2023; 327(1):7-47. Doi: https://doi.org/10.1007/s10479-023-05169-w
- 11. Dhaliwal A. The rise of automation and robotics in warehouse management. In: Transforming management using artificial intelligence techniques. CRC Press, 2020, 63-72.
- 12. Rainer Jr RK, Richey Jr RG, Chowdhury S. How robotics is shaping digital logistics and supply chain management: An ongoing call for research. Journal of Business Logistics. 2025; 46(1):e70005. Doi: https://doi.org/10.1111/jbl.70005
- 13. Hussain M, Javed W, Hakeem O, Yousafzai A, Younas A, Awan MJ, *et al.* Blockchain-based IoT devices in supply chain management: A systematic literature review. Sustainability. 2021; 13(24):13646. Doi: https://doi.org/10.3390/su132413646
- 14. Al Shareef AM, Seckiner S, Eid B, Abumeteir H. Integration of blockchain with artificial intelligence technologies in the energy sector: A systematic review.

- Frontiers in Energy Research. 2024; 12:1377950. Doi: https://doi.org/10.3389/fenrg.2024.1377950
- Tsolakis N, Schumacher R, Dora M, Kumar M. Artificial intelligence and blockchain implementation in supply chains: A pathway to sustainability and data monetisation? Annals of Operations Research. 2023; 327(1):157-210. Doi: https://doi.org/10.1007/s10479-022-04785-2
- Wang Y, Pettit S. A primer on supply chain digital transformation. Digital Supply Chain Transformation. 2022; 121:121-139. Doi: https://doi.org/10.18573/book8.g
- Awaysheh A, Klassen RD, Shafiq A, Johnson PF. Drivers of consumer protection practices: Implications for operational performance. Supply Chain Management: An International Journal. 2024; 29(2):260-278. Doi: https://doi.org/10.1108/SCM-06-2023-0284
- 18. Borucka A. Seasonal methods of demand forecasting in the supply chain as support for the company's sustainable growth. Sustainability. 2023; 15(9):7399. Doi: https://doi.org/10.3390/su15097399
- 19. Hussaini Z, Nemati A, Paydar MM. Diverse-seasons-nested-in-periods mathematical models for investigating the economic effects of supply chain planning under simultaneous seasonal fluctuations. International Journal of Systems Science: Operations & Logistics. 2024; 11(1):2328783. Doi: https://doi.org/10.1080/23302674.2024.2328783
- Singh RK, Modgil S, Acharya P. Assessment of supply chain flexibility using system dynamics modeling. Global Journal of Flexible Systems Management. 2019; 20(Suppl 1):39-63. Doi: https://doi.org/10.1007/s40171-019-00224-7
- 21. Brandenburg M, Gruchmann T, Oelze N. Sustainable supply chain management-A conceptual framework and future research perspectives. Sustainability. 2019; 11(24):7239. Doi: https://doi.org/10.3390/su11247239
- 22. Seuring S, Müller M. From a literature review to a conceptual framework for sustainable supply chain management. Journal of Cleaner Production. 2008; 16(15):1699-1710. Doi: https://doi.org/10.1016/j.jclepro.2008.04.020
- 23. Gunasekaran A, Ngai EW. Information systems in supply chain integration and management. European Journal of Operational Research. 2004; 159(2):269-295. Doi: https://doi.org/10.1016/j.ejor.2003.08.016
- Dujmešić N, Bajor I, Rožić T. Warehouse processes improvement by pick by voice technology. Tehnički vjesnik. 2018; 25(4):1227-1233. Doi: https://doi.org/10.17559/TV-20160829152732
- 25. Yu Y, De Koster MBM. Designing an optimal turnoverbased storage rack for a 3D compact automated storage and retrieval system. International Journal of Production Research. 2009; 47(6):1551-1571. Doi: https://doi.org/10.1080/00207540701576346
- 26. Tadić S, Zečević S, Krstić M. City logistics terminal location selection using combined fuzzy AHP and fuzzy TOPSIS analysis. In: Proceedings of the 1st International conference on traffic and transport engineering, ICTTE, Nov 2012, 345-358.
- 27. Rai HB, Verlinde S, Macharis C. City logistics in an omnichannel environment. The case of Brussels. Case

- Studies on Transport Policy. 2019; 7(2):310-317. Doi: https://doi.org/10.1016/j.cstp.2019.02.002
- 28. Mattarocci G, Pekdemir D. An Overview of the Role of Logistics Real Estate Europe. In: Logistic Real Estate Investment and REITs in Europe, 2017, 7-28. Doi: https://doi.org/10.1007/978-3-319-69206-7 2
- 29. Tsonkov N, Petrov K. On the need for connectivity and a new strategic approach to building road infrastructure in the Balkans. In: IOP Conference Series: Materials Science and Engineering. IOP Publishing, Dec 2023; 1297(1):p012019.
- 30. Saarinen L. Driving global growth: Strategies for Nordic IT companies internalization, 2025.
- 31. Popović S, Stojković D, Jovanović R. Services: Finance, Trade and Tourism. In: The Geography of Serbia: Nature, People, Economy. Cham: Springer International Publishing, 2021, 231-250. Doi: https://doi.org/10.1007/978-3-030-74701-5 18
- 32. Rushton A, Croucher P, Baker P. The handbook of logistics and distribution management: Understanding the supply chain. Kogan Page Publishers, 2022.