

ZELENA ORGANIZACIJSKA KULTURA I EKOLOŠKA USPJEŠNOST HOTELA U DALMACIJI: POSREDNIČKA ULOGA EKOINOVACIJA

GREEN ORGANIZATIONAL CULTURE AND ECOLOGICAL PERFORMANCE OF HOTELS IN DALMATIA: THE MEDIATING ROLE OF ECO-INNOVATIONS

JASMINA SLADOLJEV¹

¹ Veleučilište u Šibeniku, Odjel studija menadžmenta i turizma, Trg Andrije Hebranga 11, 22000 Šibenik, Republika Hrvatska / *University of Applied Sciences in Šibenik, Department of Management and Tourism Studies, Trg Andrije Hebranga 11, 22000 Šibenik, Republic of Croatia*, e-mail: jasminda.sladoljev@vus.hr, <https://orcid.org/0009-0007-4753-894X>

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Sve veći ekološki izazovi i rastuća potražnja za održivim turizmom potiču hotele na jačanje zelenih praksi. U tom kontekstu, zelena organizacijska kultura može djelovati kao ključni interni resurs, dok ekoinovacije predstavljaju mehanizam putem kojeg se taj resurs prevodi u mjerljive ekološke učinke. Cilj rada je ispitati utjecaj zelene organizacijske kulture na implementaciju ekoinovacija i ekološku uspješnost hotela, uz testiranje posredničke uloge ekoinovacija. Istraživanje je provedeno na uzorku 73 hotela u Dalmaciji, a podaci su analizirani PLS-SEM pristupom. Rezultati potvrđuju pozitivan utjecaj zelene organizacijske kulture na ekoinovacije ($\beta = 0,608$; $p < 0,001$) te pozitivan utjecaj ekoinovacija na ekološku uspješnost ($\beta = 0,440$; $p < 0,001$). Izravan utjecaj kulture na ekološku uspješnost nije značajan ($\beta = 0,149$; $p = 0,155$), dok je neizravan učinak putem ekoinovacija značajan ($\beta = 0,267$; $p < 0,001$), što upućuje na obrazac potpune medijacije. Rezultati upućuju na to da zelene organizacijske vrijednosti ostvaruju učinak na okolišne rezultate ponajprije konkretnim ekoinovacijskim aktivnostima, čime se pruža empirijska potpora RBV/NRBV objašnjenju mehanizma djelovanja organizacijskih resursa u hotelskom sektoru.

KLJUČNE RIJEČI: zelena organizacijska kultura, ekoinovacije, ekološka uspješnost, hotelijerstvo, NRBV

Increasing environmental challenges and the growing demand for sustainable tourism encourage hotels to enhance green practices. In this context, green organizational culture may function as a key internal resource, while eco-innovation represents the mechanism through which this resource is translated into measurable ecological outcomes. The aim of this paper is to examine the impact of green organizational culture on the implementation of eco-innovations and the ecological performance of hotels, while testing the mediating role of eco-innovations. The research was conducted on a sample of 73 hotels in Dalmatia, and the data were analysed using the PLS-SEM approach. The results confirm a positive effect of green organizational culture on eco-innovations ($\beta = 0.608$; $p < 0.001$) and a positive effect of eco-innovations on ecological performance ($\beta = 0.440$; $p < 0.001$). The direct effect of culture on ecological performance is not significant ($\beta = 0.149$; $p = 0.155$), whereas the indirect effect through eco-innovations is significant ($\beta = 0.267$; $p < 0.001$),

indicating a pattern of full mediation. Findings suggest that green organizational values influence environmental outcomes primarily through concrete eco-innovation activities, thereby providing empirical support for the RBV/NRBV explanation of the mechanism through which organizational resources operate in the hotel sector.

KEYWORDS: green organizational culture, eco-innovations, ecological performance, hospitality industry, NRBV

UVOD

Turizam je važan pokretač gospodarskog razvoja te istodobno generira značajne okolišne pritiske povećanom potrošnjom resursa, emisijama stakleničkih plinova i stvaranjem otpada (Siti-Nabiha i sur., 2014), čime doprinosi klimatskim promjenama (Koçak i sur., 2020). U takvom kontekstu, pitanje održivosti jedno je od ključnih izazova suvremenog turističkog razvoja.

Hotelski sektor ima posebno važnu ulogu u ostvarivanju održivosti turizma jer se ubraja među najveće potrošače energije i prirodnih resursa unutar turističke industrije. Poslovanje hotela obilježeno je intenzivnom potrošnjom vode, energije i hrane te stvaranjem otpada i emisijama onečišćujućih tvari (Aboelmaged, 2018; Bohdanowicz, 2006). Procjenjuje se da hotelski sektor doprinosi približno 1 % globalnih emisija ugljika, što ističe potrebu za primjenom održivih praksi u hotelijerstvu (Sustainable Hospitality Alliance, 2022). U skladu s tim, hoteli se sve više usmjeravaju na smanjenje emisija ugljika, korištenje obnovljivih izvora energije i unapređenje praksi upravljanja vodama, kao odgovor na rastuće pritiske vezane za održivost (Khatter, 2023).

Važnost održivog poslovanja posebno dolazi do izražaja u turističkim regijama čija konkurentnost u velikoj mjeri ovisi o očuvanosti prirodnih resursa i kvaliteti okoliša. Dalmacija, kao jedna od najvažnijih turističkih regija Hrvatske, posebno je relevantan kontekst za istraživanje održivosti hotelskog poslovanja zbog izražene turističke intenzivnosti, sezonalnosti i snažne ovisnosti turističke ponude o okolišnim resursima. Intenzivna turistička aktivnost tijekom glavne sezone dodatno povećava pritisak na potrošnju energije i vode te sustave gospodarenja otpadom. Stoga održivo upravljanje resursima i implementacija ekoinovacija postaju ključni preduvjeti dugoročne konkurentnosti destinacije.

U teorijskom smislu, ovo istraživanje temelji se na resursno utemeljenom pristupu (*Resource-Based View* – RBV), prema kojem konkurentska prednost proizlazi iz vrijednih, rijetkih i teško imitabilnih internih resursa (Barney, 1991),

INTRODUCTION

Tourism represents an important driver of economic development; however, at the same time, it generates significant environmental pressures through increased resource consumption, greenhouse gas emissions, and waste generation (Siti Nabiha et al., 2014), thereby contributing to climate change (Koçak et al., 2020). In this context, sustainability becomes one of the key challenges of contemporary tourism development.

The hotel sector plays a particularly important role in achieving tourism sustainability, as it is among the largest consumers of energy and natural resources within the tourism industry. Hotel operations are characterised by intensive consumption of water, energy, and food, as well as by waste generation and pollutant emissions (Aboelmaged, 2018; Bohdanowicz, 2006). The hotel sector is estimated to account for approximately 1% of global carbon emissions, underscoring the need for the implementation of sustainable practices within the hospitality industry (Sustainable Hospitality Alliance, 2022). Accordingly, hotels are increasingly adopting measures aimed at reducing carbon emissions, increasing the use of renewable energy sources, and enhancing water management practices in response to growing sustainability-related pressures (Khatter, 2023).

The importance of sustainable business practices is particularly evident in tourist regions whose competitiveness largely depends on the preservation of natural resources and environmental quality. Dalmatia, as one of the most important tourist regions in Croatia, represents a particularly relevant context for investigating the sustainability of hotel operations due to its pronounced tourism intensity, seasonality, and strong dependence of tourism supply on environmental resources. Intensive tourism activity during the peak season further increases pressure on energy and water consumption, as well as on waste management systems, making sustainable resource management and the implementation of eco-innovations key prerequisites for the long-term competitiveness of the destination.

From a theoretical perspective, this research is grounded in the Resource-Based View (RBV), according to which competitive advantage arises from valuable, rare, and difficult-to-imitate inter-

te na prirodno resursno utemeljenom pristupu (*Natural Resource-Based View* – NRBV), koji naglašava ulogu okolišno usmjerenih organizacijskih resursa i sposobnosti u ostvarivanju održive konkurentne prednosti (Hart, 1995). Jedan od ključnih takvih resursa u hotelskom sektoru je zelena organizacijska kultura koja podrazumijeva integraciju okolišnih vrijednosti u poslovanje poduzeća, poticanje održivog ponašanja zaposlenika i razvoj organizacijske predanosti zaštiti okoliša. U skladu s prirodno resursno utemeljenom pristupom, organizacijski resursi ne djeluju nužno izravno na uspješnost, već svoj učinak ostvaruju razvojem specifičnih organizacijskih sposobnosti. U tom kontekstu, ekoinovacije su ključni mehanizam putem kojeg se organizacijske vrijednosti usmjerene na održivost prevode u konkretne aktivnosti i mjerljive ekološke rezultate.

Ekoinovacije obuhvaćaju razvoj proizvoda/usluga, procesa, organizacijskih praksi i marketinških aktivnosti koje pridonose smanjenju potrošnje resursa, emisija i okolišnih rizika (Kemp & Pearson, 2008). Unatoč njihovoj važnosti, istraživanje ekoinovacija u hotelskom sektoru i dalje je ograničeno (García-Pozo i sur., 2015). Posebno su rijetke studije koje obuhvaćaju različite tipove ekoinovacija (García-Granero i sur., 2018; Marcon i sur., 2017), kao i organizacijske čimbenike koji potiču njihov razvoj u hotelskom sektoru (Aboelmaged, 2018). Nadalje, nedostaju empirijska istraživanja koja ispituju mehanizam putem kojeg zelena organizacijska kultura pridonosi ekološkoj uspješnosti hotela ekoinovacijama. U skladu s tim, postavlja se pitanje kako zelena organizacijska kultura pridonosi ekološkoj uspješnosti hotela te ostvaruje li se taj učinak izravno ili posredno putem ekoinovacija. Posebno je važno razumjeti ulogu implementacije različitih tipova ekoinovacija u tom odnosu.

Polazeći od identificiranog istraživačkog jaza, ovaj rad pridonosi literaturi na tri načina. Prvo, empirijski ispituje posredničku ulogu ekoinovacija u odnosu između zelene organizacijske kulture i ekološke uspješnosti hotela, čime se pridonosi razumijevanju mehanizma putem kojeg organizacijski resursi pridonose ostvarivanju

nal resursa (Barney, 1991), and the Natural Resource-Based View (NRBV), which emphasises the role of environmentally oriented organizational resources and capabilities in achieving sustainable competitive advantage (Hart, 1995). One of the key resources in the hotel sector is green organizational culture, which implies the integration of environmental values into business operations, the encouragement of sustainable employee behaviour, and the development of organizational commitment to environmental protection. In line with the NRBV approach, organizational resources do not necessarily exert a direct influence on performance but achieve their effect through the development of specific organizational capabilities. In this context, eco-innovations represent a key mechanism through which organizational values oriented towards sustainability are translated into concrete activities and measurable ecological outcomes.

Eco-innovations encompass the development of products/services, processes, organizational practices, and marketing activities that contribute to reducing resource consumption, emissions, and environmental risks (Kemp & Pearson, 2008). Despite their importance, re-search on eco-innovations in the hotel sector remains limited (García Pozo et al., 2015). Studies encompassing different types of eco-innovations are particularly scarce (García Granero et al., 2018; Marcon et al., 2017), as are studies addressing the organizational factors that stimulate their development in the hotel sector (Aboelmaged, 2018). Furthermore, there is a lack of empirical research examining the mechanism through which green organizational culture contributes to the ecological performance of hotels through eco-innovations. Accordingly, the question arises as to how green organizational culture contributes to the eco-logical performance of hotels and whether this effect is achieved directly or indirectly through eco-innovations. It is particularly important to understand the role of implementing different types of eco-innovations within this relationship.

Building on the identified research gap, this paper contributes to literature in three ways. First, it empirically examines the mediating role of eco-innovations in the relationship between green organizational culture and the ecological performance of hotels, thereby contributing to the understanding of the mechanism

ekoloških rezultata. Drugo, istraživanje proširuje postojeće spoznaje na kontekst hotelskog sektora Dalmacije, regije obilježene visokom turističkom intenzivnošću, izraženom sezonalnošću i snažnom ovisnošću konkurentnosti o očuvanju okolišnih resursa. Treće, ekoinovacije su operacionalizirane kao agregirani pokazatelj implementacije različitih tipova ekoinovacijskih aktivnosti, odnosno ekoinovacija proizvoda/usluga, procesa, organizacije i marketinga, čime se omogućuje šire sagledavanje njihove primjene u hotelskom sektoru.

Cilj ovoga rada je ispitati utjecaj zelene organizacijske kulture na ekoinovacije i ekološku uspješnost hotela, s posebnim naglaskom na posredničku ulogu ekoinovacija.

PREGLED LITERATURE I RAZVOJ HIPOTEZA

Teorija prirodno-resursno utemeljenog pogleda i resursno utemeljena teorija

Teorijska osnova ovoga istraživanja temelji se na RBV i NRBV pristupu. RBV je okvir kojim se menadžment koristi za identifikaciju i iskorištavanje strateških resursa radi postizanja i održavanja konkurentne prednosti (Barney, 1991). Na tu se teoriju nadovezuje NRBV, koji ističe da se konkurentna prednost poduzeća temelji na njegovu odnosu s prirodnim okolišem (Hart, 1995).

NRBV obuhvaća tri ključne strateške sposobnosti: sprječavanje onečišćenja, upravljanje proizvodom i održivi razvoj. Sprječavanje onečišćenja proizlazi iz pritisaka za smanjenje emisija i otpada (Hart, 1995), pri čemu poduzeća razvijaju strategije temeljene na unapređenju procesa, recikliranju i inovacijama radi smanjenja troškova i postizanja konkurentskih prednosti (Frosch & Gallopoulos, 1989; Willig, 1994). Upravljanje proizvodom usmjereno je na razvoj „zelenih“ proizvoda inovacijama i uključivanjem dionika te primjenom analize životnog ciklusa (Keoleian & Menerey, 1993). Održivi razvoj integrira ekološke i ekonomske ciljeve, zahtijeva dugoročna ulaganja i usmjeren je na smanjenje negativnih utjecaja rasta na okoliš.

through which organizational resources contribute to the achievement of ecological outcomes. Second, the research extends existing knowledge to the context of the hotel sector in Dalmatia, a region characterised by high tourism intensity, pronounced seasonality, and strong competitiveness dependence on the preservation of environmental resources. Third, eco-innovations are operationalised as an aggregated indicator of the implementation of different types of eco-innovation activities, namely product/service, process, organizational, and marketing eco-innovations, thereby enabling a broader understanding of their application in the hotel sector.

The aim of this paper is to examine the impact of green organizational culture on eco-innovations and the ecological performance of hotels, with particular emphasis on the mediating role of eco-innovations.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Natural resource-based view theory and resource-based view theory

The theoretical foundation of this research can be linked to the RBV of a firm and the NRBV. RBV represents a framework used by management to identify and exploit strategic resources to achieve and sustain competitive advantage (Barney, 1991). Building upon this theory, the NRBV emphasises that a firm's competitive advantage is based on its relationship with the natural environment (Hart, 1995).

The NRBV encompasses three key strategic capabilities: pollution prevention, product stewardship, and sustainable development. Pollution prevention arises from pressures to reduce emissions and waste (Hart, 1995), whereby firms develop strategies based on process improvement, recycling, and innovation to reduce costs and achieve competitive advantages (Frosch & Gallopoulos, 1989; Willig, 1994). Product stewardship is focused on the development of “green” products through innovation, stakeholder involvement, and the application of life cycle analysis (Keoleian & Menerey, 1993). Sustainable development integrates ecological and economic goals, requires long-term investments, and is aimed at reducing the negative environmental impacts of growth.

Zelena organizacijska kultura

Hotelski sektor suočava se sa sve izraženijim ekološkim i ekonomskim pritiscima, uključujući visoku potrošnju resursa te rastuće zahtjeve gostiju za održivim uslugama, što potiče implementaciju zelenih poslovnih modela (Rodríguez-Antón i sur., 2012). U tom kontekstu, održivost postaje ključni strateški prioritet, a okolišni ciljevi sve se češće integriraju u poslovne strategije poduzeća (Hoffman, 2001).

U skladu s NRBV teorijom (Hart, 1995), interni resursi i organizacijske sposobnosti temelj su razvoja učinkovitih ekoloških strategija. Među njima se ističe zelena organizacijska kultura kao važan nematerijalni resurs koji može pridonijeti konkurentskoj prednosti i ekološkoj uspješnosti.

Iako regulatorni zahtjevi i menadžerske odluke mogu inicirati promjene, njihova uspješna implementacija uvelike ovisi o organizacijskoj kulturi (Crane, 1995). Organizacijska kultura oblikuje ponašanje zaposlenika i podržava provedbu strategija, dok dijeljenje zelenih vrijednosti potiče ekološki odgovorno djelovanje i usmjerenost prema održivosti (Newton & Harte, 1997; Parr, 2012).

Zelena organizacijska kultura usmjerena je na rješavanje ekoloških problema, smanjenje negativnih i povećanje pozitivnih učinaka poslovanja na okoliš (Roscoe i sur., 2019). Takva kultura potiče razvoj novih ideja, suradnju zaposlenika i prihvaćanje održivih rješenja, čime se stvaraju preduvjeti za razvoj ekoinovacija proizvoda, procesa i organizacijskih praksi.

Slijedom navedenoga, zelena organizacijska kultura ključan je organizacijski preduvjet za razvoj ekoinovacija i unapređenje ekološke uspješnosti hotela. Stoga se očekuje da zelena organizacijska kultura pozitivno utječe na razvoj ekoinovacija te može izravno pridonijeti unapređenju ekološke uspješnosti.

Ekoinovacije

Sve veća svijest o klimatskim promjenama, regulatorni pritisci i promjene preferencija potrošača potiču poduzeća na uvođenje ekoinovacija radi

Green organizational culture

The hotel sector is facing increasingly pronounced environmental and economic pressures, including high resource consumption and growing guest demands for sustainable services, which encourage the implementation of green business models (Rodríguez-Antón et al., 2012). In this context, sustainability becomes a key strategic priority, and environmental objectives are increasingly integrated into firms' business strategies (Hoffman, 2001).

In accordance with the Natural Resource-Based View theory (Hart, 1995), internal resources and organizational capabilities constitute the foundation for the development of effective environmental strategies. Among these, green organizational culture stands out as an important intangible resource that may contribute to competitive advantage and ecological performance. Although regulatory requirements and managerial decisions may initiate change, their successful implementation largely depends on organizational culture (Crane, 1995). Organizational culture shapes employee behaviour and supports strategy implementation, while the sharing of green values encourages environmentally responsible behaviour and orientation towards sustainability (Newton & Harte, 1997; Parr, 2012).

Green organizational culture is oriented towards addressing environmental problems, reducing negative environmental impacts, and increasing the positive effects of business operations on the environment (Roscoe et al., 2019). Such a culture encourages the development of new ideas, collaboration among employees, and the adoption of sustainable solutions, thereby creating the preconditions for the development of product, process, and organizational eco-innovations.

Following the above, green organizational culture represents a key organizational prerequisite for the development of eco-innovations and the enhancement of hotels' ecological performance. Therefore, it is expected that green organizational culture positively affects the development of eco-innovations and it may directly contribute to the improvement of ecological performance.

smanjenja negativnih utjecaja na okoliš i jačanja konkurentnosti (OECD, 2013). U radu se pojmovi ekoinovacije i zelene inovacije upotrebljavaju naizmjenično, ovisno o terminologiji korištenoj u izvornoj literaturi, pri čemu oba pojma označavaju inovacije usmjerene na smanjenje negativnog utjecaja na okoliš. Ekoinovacije obuhvaćaju nove ili značajno poboljšane proizvode, procese, organizacijske metode i marketinške pristupe koji tijekom životnog ciklusa smanjuju potrošnju resursa, emisije i okolišne rizike (Kemp & Pearson, 2008). U tom kontekstu, zelene inovacije odnose se na razvoj proizvoda, procesa i organizacijskih rješenja koji smanjuju ekološki otisak i pridonose postizanju okolišnih ciljeva (Gürlek & Tuna, 2018; Küçükoğlu & Pinar, 2016; Wang, 2019).

U literaturi se ekoinovacije najčešće konceptualiziraju u četiri dimenzije. Ekoinovacije proizvoda/usluga odnose se na razvoj ponude s manjim utjecajem na okoliš (Dong i sur., 2014), dok ekoprocne inovacije uključuju tehnološka i operativna rješenja usmjerena na uštedu resursa i smanjenje emisija (Sehnm i sur., 2016). Ekoorganizacijske inovacije obuhvaćaju promjene u upravljanju i internim praksama koje podupiru okolišne ciljeve (Yurdakul & Kazan, 2020), dok ekomarketinške inovacije obuhvaćaju primjenu novih marketinških pristupa usmjerenih na promoviranje održivih proizvoda i usluga (Chege & Wang, 2020).

U hotelskom sektoru ekoinovacije imaju posebnu važnost jer pridonose unapređenju okoliša i poslovnoj uspješnosti (Dangelico & Pujari, 2010; Martínez-Perez i sur., 2015).

U skladu s RBV pristupom, ekoinovacije se sve češće promatraju kao strateški resurs poduzeća koji omogućuje ostvarivanje konkurentne prednosti (Aboelmaged, 2018; Kuo i sur., 2021). Unatoč rastućem interesu, njihova uloga i dalje nije sasvim razjašnjena, osobito u kontekstu hotelskog sektora, što dodatno opravdava potrebu za ovim istraživanjem. Slijedom navedenoga, ekoinovacije mogu pridonijeti unapređenju ekološke uspješnosti poduzeća.

Ekološka uspješnost

Uravnoteživanje društvenih vrijednosti i zaštite okoliša s ekonomskim rastom smatra se

Eco-Innovations

Increasing awareness of climate change, regulatory pressures, and changing consumer preferences encourage firms to introduce eco-innovations to reduce negative environmental impacts and strengthen competitiveness (OECD, 2013). In this paper, the terms *eco-innovations* and *green innovations* will be used interchangeably, depending on the terminology employed in the original literature, whereby both concepts refer to innovations aimed at reducing negative environmental impacts. Eco-innovations encompass new or significantly improved products, processes, organizational methods, and marketing approaches that reduce resource consumption, emissions, and environmental risks throughout their life cycle (Kemp & Pearson, 2008). In this context, green innovations refer to the development of products, processes, and organizational solutions that reduce ecological footprint and contribute to the achievement of environmental goals (Gürlek & Tuna, 2018; Küçükoğlu & Pinar, 2016; Wang, 2019).

In the literature, eco-innovations are most conceptualised through four dimensions. Product/service eco-innovations refer to the development of offers with a lower environmental impact (Dong et al., 2014), whereas eco-process innovations include technological and operational solutions aimed at resource savings and emission reduction (Sehnm et al., 2016).

Eco-organizational innovations encompass changes in management and internal practices that support environmental objectives (Yurdakul & Kazan, 2020), while eco-marketing innovations involve the application of new marketing approaches aimed at promoting sustainable products and services (Chege & Wang, 2020).

In the hotel sector, eco-innovations are of particular importance because they contribute to environmental improvement and business performance (Dangelico & Pujari, 2010; Martínez-Perez et al., 2015).

In accordance with the Resource-Based View approach, eco-innovations are increasingly viewed as a strategic resource of firms that enables the achievement of competitive advantage (Aboelmaged, 2018; Kuo et al., 2021). However, despite growing interest, their role remains insufficiently clarified, particularly in the context of the hotel sector, which further jus-

ključnim ciljem održivog razvoja organizacija (Gürlek & Tuna, 2018). Poduzeća diljem svijeta usvajaju prakse zelene inovacije radi smanjenja negativnog utjecaja na okoliš i poboljšanja ekonomske uspješnosti (Miroshnychenko i sur., 2017). Ekološka uspješnost može uključivati stjecanje ekoloških certifikata (Asadi i sur., 2020; Wang, 2019), poboljšanje ekološke izvedbe, usklađenost s okolišnim standardima i smanjenje potrošnje energije (Asadi i sur., 2020). Ekološka uspješnost pomaže organizacijama u smanjenju troškova putem niže potrošnje energije i usklađenosti s ekološkim propisima, ispunjavanju zahtjeva ključnih dionika, te doprinosi očuvanju kvalitete okoliša (García-Machado & Martínez-Ávila, 2019).

Razvoj hipoteza

Zelena organizacijska kultura i ekoinovacije

Dosadašnja empirijska istraživanja dosljedno potvrđuju pozitivnu povezanost zelene organizacijske kulture i inovacijskih aktivnosti usmjerenih na okoliš. Roespinoedji i sur. (2019) utvrdili su značajan pozitivan utjecaj zelene organizacijske kulture na zelene inovacije. Slične nalaze potvrđuju Wang (2019) i Küçükoğlu i Pınar (2016), dok novija istraživanja dodatno potvrđuju tu vezu i u hotelskom sektoru (Asadi i sur., 2020; Fatoki, 2021; Gu, 2023; Roespinoedji i sur., 2019).

Rezultati upućuju na zaključak da poduzeća s razvijenijom zelenom organizacijskom kulturom pokazuju veću sklonost implementaciji ekoinovacija proizvoda, procesa, organizacije i marketinga. U skladu s tim, postavlja se sljedeća hipoteza:

H1: Zelena organizacijska kultura ima pozitivan i statistički značajan utjecaj na ekoinovacije u hotelskom sektoru.

Zelena organizacijska kultura i ekološka uspješnost

Zelena organizacijska kultura usmjerena je na rješavanje ekoloških problema, smanjenje negativnih i povećanje pozitivnih učinaka poslovanja na

tifies the need for this research. Following the above, eco-innovations may contribute to the enhancement of firms' ecological performance.

Ecological performance

Balancing social values and environmental protection with economic growth is considered a key objective of sustainable organizational development (Gürlek & Tuna, 2018). Firms worldwide adopt green innovation practices with the aim of reducing negative environmental impacts and improving economic performance (Miroshnychenko et al., 2017). Ecological performance may include obtaining environmental certifications (Asadi et al., 2020; Wang, 2019), improving environmental performance, compliance with environmental standards, and reducing energy consumption (Asadi et al., 2020). Ecological performance helps organizations reduce costs through lower energy consumption and compliance with environmental regulations, facilitates the fulfilment of key stakeholder requirements, and contributes to maintaining environmental quality (García-Machado & Martínez-Ávila, 2019).

Hypothesis development

Green organizational culture and eco-innovations

Previous empirical studies consistently confirm a positive relationship between green organizational culture and environmentally oriented innovation activities. Roespinoedji et al. (2019) identified a significant positive effect of green organizational culture on green innovations. Similar findings are confirmed by Wang (2019) and Küçükoğlu and Pınar (2016), while more recent studies further confirm this relationship in the hotel sector (Asadi et al., 2020; Fatoki, 2021; Gu, 2023; Roespinoedji et al., 2019).

These findings suggest that firms with a more developed green organizational culture demonstrate a greater propensity to implement product, process, organizational, and marketing eco-innovations. Accordingly, the following hypothesis is proposed:

H1: Green organizational culture has a positive and statistically significant effect on eco-innovations in the hotel sector.

okoliš (Roscoe i sur., 2019). U hotelskom sektoru, poduzeća koja razvijaju i njeguju zelene vrijednosti pokazuju veću sposobnost implementacije rješenja usmjerenih na smanjenje negativnih utjecaja na okoliš (Fraj i sur., 2015; Gürlek & Tuna, 2018). Empirijska istraživanja potvrđuju značajnu pozitivnu povezanost između zelene organizacijske kulture i ekološke uspješnosti u hotelskom sektoru (Fatoki, 2021). Slični nalazi potvrđeni su i u drugim industrijama. Wang (2019) utvrđuje značajnu pozitivnu povezanost zelene organizacijske kulture i ekološke uspješnosti u proizvodnim poduzećima. Također, García-Machado i Martínez-Ávila (2019) potvrđuju da zelena organizacijska kultura pozitivno utječe na ekološku uspješnost poduzeća. U skladu s tim, postavlja se sljedeća hipoteza:

H2: Zelena organizacijska kultura ima pozitivan i statistički značajan utjecaj na ekološku uspješnost.

Ekoinovacije i ekološka uspješnost hotela

U suvremenom hotelskom poslovanju ekoinovacije imaju sve važniju ulogu jer omogućuju smanjenje negativnih utjecaja na okoliš, učinkovitije korištenje resursa te jačanje održive konkurentnosti. Uvođenje ekološki prihvatljivih proizvoda, procesa i organizacijskih rješenja ključan je instrument za ostvarivanje boljih ekoloških rezultata i dugoročne otpornosti hotela.

Prethodna istraživanja dosljedno potvrđuju pozitivan doprinos ekoinovacija održivosti i poslovnoj uspješnosti. Elzek i sur. (2021) pokazali su da zelene inovacije proizvoda, procesa, tehnologije i organizacije pozitivno utječu na održivost poduzeća. Slične nalaze iznose Alsughayir (2017) i Ma i sur. (2018), dok Eryiğit i Özcüre (2015) navode da inovacije zelenih proizvoda smanjuju negativne utjecaje na okoliš. Također, Saudi i sur. (2019) i Tseng i sur. (2013) potvrđuju pozitivan učinak zelenih inovacija proizvoda na ekološku i održivu uspješnost, dok Fatoki (2021) i Marfo i sur. (2024) utvrđuju značajnu pozitivnu povezanost ekoinovacija i ekološke uspješnosti.

Pozitivan učinak potvrđen je i kod procesnih inovacija. Küçükoglu i Pınar (2016) ističu da

Green organizational culture and ecological performance

Green organizational culture is oriented towards addressing environmental problems, reducing negative environmental impacts, and increasing the positive effects of business operations on the environment (Roscoe et al., 2019). In the hotel sector, firms that develop and foster green values demonstrate a greater capacity to implement solutions aimed at reducing negative environmental impacts (Fraj et al., 2015; Gürlek & Tuna, 2018). Empirical studies confirm a significant positive relationship between green organizational culture and ecological performance in the hotel sector (Fatoki, 2021). Similar findings have also been confirmed in other industries. Wang (2019) identifies a significant positive relationship between green organizational culture and ecological performance in manufacturing firms. Furthermore, García-Machado and Martínez-Ávila (2019) confirm that green organizational culture positively affects firms' ecological performance. Accordingly, the following hypothesis is proposed:

H2: Green organizational culture has a positive and statistically significant effect on ecological performance.

Eco-Innovations and the ecological performance of hotels

In contemporary hotel operations, eco-innovations play an increasingly important role, as they enable the reduction of negative environmental impacts, more efficient resource utilisation, and the strengthening of sustainable competitiveness. The introduction of environmentally friendly products, processes, and organizational solutions represents a key instrument for achieving improved ecological outcomes and the long-term resilience of hotels.

Previous studies consistently confirm the positive contribution of eco-innovations to sustainability and business performance. Elzek et al. (2021) demonstrated that green product, process, technological, and organizational innovations positively affect firm sustainability. Similar findings are reported by Alsughayir (2017) and Ma et al. (2018), while Eryiğit and Özcüre (2015) emphasise that green product innovations reduce negative environmental impacts. Fur-

zelene procesne inovacije smanjuju negativan utjecaj na okoliš uz istodobno unapređenje poslovnih rezultata, dok dodatna istraživanja potvrđuju njihov doprinos ukupnoj održivoj uspješnosti (Eryiğit & Özcüre, 2015; Tseng i sur., 2013).

Navedeni nalazi upućuju na zaključak da hoteli koji implementiraju više tipova ekoinovacija ostvaruju bolje ekološke rezultate smanjenjem negativnog utjecaja na okoliš i učinkovitijim korištenjem resursa. U skladu s tim, postavlja se sljedeća hipoteza:

H3: Ekoinovacije imaju pozitivan i statistički značajan utjecaj na ekološku uspješnost hotela.

Posrednička uloga ekoinovacija u odnosu između zelene organizacijske kulture i ekološke uspješnosti

Wang (2019) navodi da poduzeća mogu unprirediti svoju ekološku uspješnost zelenim inovacijama razvijenim unutar organizacijske kulture koja podržava okolišne vrijednosti. Poduzeća s razvijenom zelenom organizacijskom kulturom imaju veću sposobnost generiranja i implementacije inovacija usmjerenih na smanjenje otpada, onečišćenja i potrošnje energije, što posljedično pridonosi poboljšanju ekološke uspješnosti. Slično tome, Gürlek i Tuna (2018) navode da zelena organizacijska kultura stvara povoljne uvjete za razvoj zelenih inovacija dijeljenjem okolišnih vrijednosti unutar organizacije. U tom smislu, zelena organizacijska kultura ne utječe na ekološku uspješnost samo izravno, već i posredno poticanjem ekoinovacija.

Empirijski nalazi dodatno potvrđuju tu vezu. Fatoki (2021) utvrđuje da ekoinovacije imaju medijacijsku ulogu u odnosu između zelene organizacijske kulture i ekološke uspješnosti. U skladu s NRBV teorijom, interni resursi i organizacijske sposobnosti ne utječu samo izravno na uspješnost, već putem razvoja specifičnih sposobnosti i inovacija koje generiraju konkurentsku prednost (Hart, 1995). U skladu s teorijskim i empirijskim nalazima, postavlja se sljedeća hipoteza:

H4: Ekoinovacije posreduju odnos između zelene organizacijske kulture i ekološke uspješnosti.

thermore, Saudi et al. (2019) and Tseng et al. (2013) confirm the positive effect of green product innovations on ecological and sustainable performance, while Fatoki (2021) and Marfo et al. (2024) identify a significant positive relationship between eco-innovations and ecological performance.

A positive effect has also been confirmed for process innovations. Küçükoğlu and Pınar (2016) emphasise that green process innovations reduce negative environmental impacts while simultaneously improving business performance, whereas additional studies confirm their contribution to overall sustainable performance (Eryiğit & Özcüre, 2015; Tseng et al., 2013).

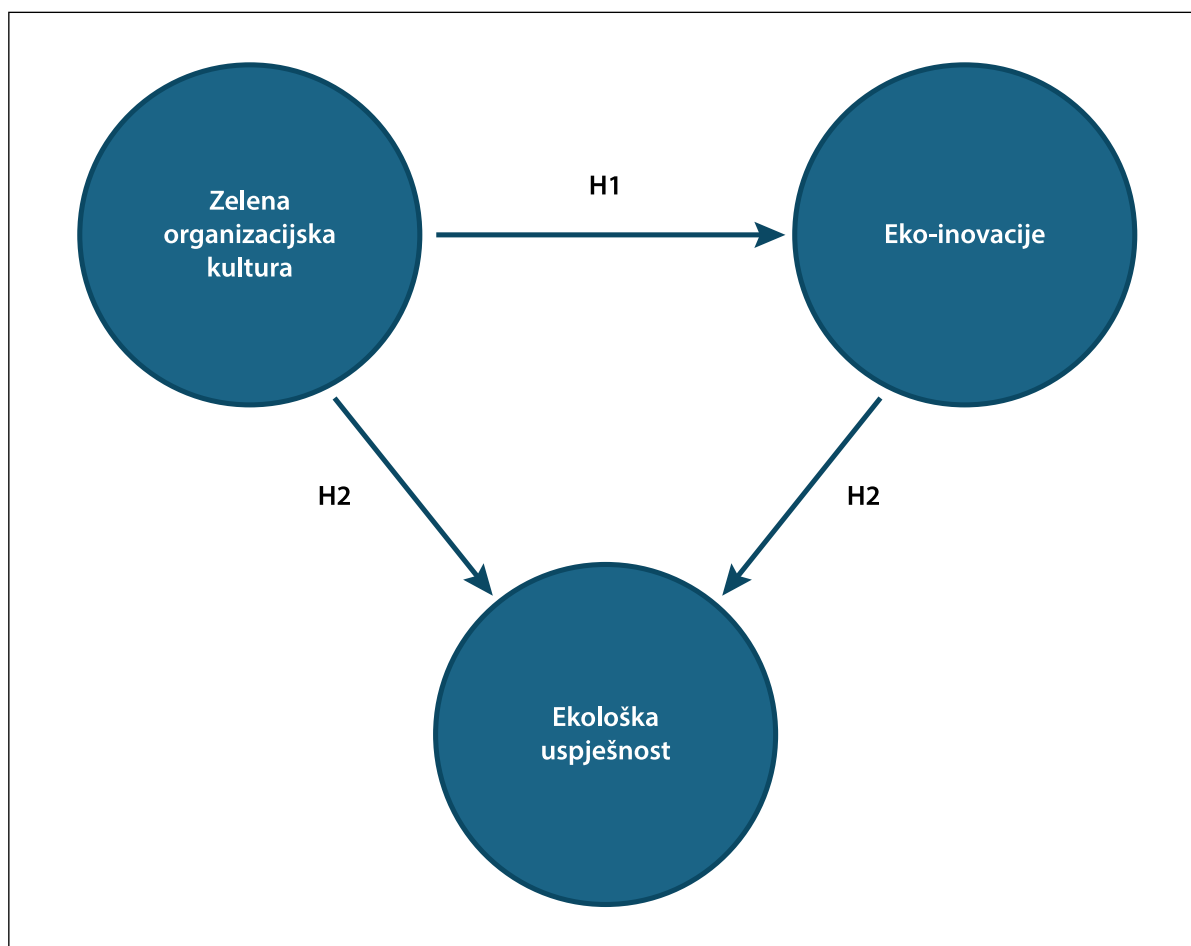
These findings suggest that hotels implementing multiple types of eco-innovations achieve better ecological outcomes through the reduction of negative environmental impacts and more efficient resource utilisation. Accordingly, the following hypothesis is proposed:

H3: Eco-innovations have a positive and statistically significant effect on the ecological performance of hotels.

Mediating role of eco-innovations in the relationship between green organizational culture and ecological performance

Wang (2019) highlights that firms can improve their ecological performance through green innovations developed within an organizational culture that supports environmental values. Firms with a well-developed green organizational culture possess a greater capacity to generate and implement innovations aimed at reducing waste, pollution, and energy consumption, which consequently contributes to improved ecological performance. Similarly, Gürlek and Tuna (2018) emphasise that green organizational culture creates favourable conditions for the development of green innovations through the sharing of environmental values within the organization. In this sense, green organizational culture does not affect ecological performance only directly but also indirectly through the promotion of eco-innovations.

Empirical findings further confirm this relationship. Fatoki (2021) finds that eco-innovations play a mediating role in the relationship between green organizational culture and ecological performance. In accordance with the Natural Resource-Based View



SLIKA 1. Konceptualni model

FIGURE 1 Conceptual Model

Izvor: izrada autorice / Source: author's own work

Konceptualni model

Predloženi konceptualni model temelji se na pretpostavci da zelena organizacijska kultura predstavlja ključni interni organizacijski resurs koji može potaknuti razvoj ekoinovacija te posljedično pridonosi ekološkoj uspješnosti hotela. U skladu s resursno utemeljenim pristupom (RBV) i prirodno resursno utemeljenim pristupom (NRBV), organizacijski resursi ne ostvaruju nužno učinak na uspješnost izravno, već putem razvoja specifičnih organizacijskih sposobnosti. U tom modelu ekoinovacije predstavljaju mehanizam putem kojeg se organizacijske vrijednosti usmjerene na održivost prevode u konkretne aktivnosti i mjerljive ekološke rezultate.

Model pretpostavlja pozitivan izravan utjecaj zelene organizacijske kulture na ekoinovacije proizvoda/usluga, procesa, organizacije i marketinga te pozitivan učinak ekoinovacija na ekološku uspješnost hotela. Istodobno, model pret-

theory, internal resources and organizational capabilities do not affect performance solely through direct effects but also through the development of specific capabilities and innovations that generate competitive advantage (Hart, 1995). Based on the theoretical and empirical findings, the following hypothesis is proposed:

H4: Eco-innovations mediate the relationship between green organizational culture and ecological performance.

Conceptual model

The proposed conceptual model assumes that green organizational culture represents a key internal organizational resource capable of stimulating the development of eco-innovations and consequently contributing to the ecological performance of hotels. In accordance with the RBV and the NRBV, organizational resources do not necessarily exert an effect on performance directly but rather through the development of specific organizational capabilities.

postavlja i izravan učinak zelene organizacijske kulture na ekološku uspješnost, koji proizlazi iz internaliziranih organizacijskih vrijednosti i praksi usmjerenih na zaštitu okoliša. Pretpostavlja se i neizravan učinak putem ekoinovacija, čime se ispituje njihova posrednička uloga u prijenosu učinka organizacijskih resursa na ekološke rezultate. U ovom istraživanju ekoinovacije su operacionalizirane agregirano, kao pokazatelj opsega implementacije različitih tipova ekoinovacijskih aktivnosti na razini hotela, što omogućuje cjelovitiji uvid u njihovu primjenu unutar hotelskog sektora.

Predloženi model integrira organizacijske, inovacijske i ekološke aspekte poslovanja te pruža teorijski okvir za razumijevanje načina na koji zelena organizacijska kultura izravno i posredno, implementacijom ekoinovacija, pridonosi ekološkoj uspješnosti hotela.

METODOLOGIJA

Prikupljanje podataka i uzorak

U ovom radu upotrebljava se poduzorak hotela kategorije tri, četiri i pet zvjezdica koji posluju na području Dalmacije, izdvojen iz šireg empirijskog istraživanja provedenog u hotelskom sektoru Republike Hrvatske. Prostorni obuhvat istraživanja obuhvaća područje Zadarske, Šibensko-kninske, Splitsko-dalmatinske i Dubrovačko-neretvanske županije. Prostorni fokus na Dalmaciju odabran je zbog specifičnosti regije, obilježene visokom turističkom intenzivnošću, izraženom sezonalnošću poslovanja i snažnom ovisnošću turističke konkurentnosti o očuvanošću okoliša, kvaliteti prirodnih resursa i učinkovitom upravljanju energijom, vodom i otpadom, što dodatno naglašava važnost održivog poslovanja hotelskog sektora. Okvir uzorka obuhvatio je sve registrirane hotele navedenih kategorija, pri čemu je identificirano 308 hotela (123 hotela s tri zvjezdice, 157 hotela s četiri zvjezdice i 28 hotela s pet zvjezdica). Podaci su prikupljeni online anketnim upitnikom, koji je elektroničkom poštom distribuiran svim identificiranim hotelima. Istraživanje je provedeno od lipnja do prosinca 2023. godine, a radi povećanja stope

In this model, eco-innovations represent the mechanism through which organizational values oriented towards sustainability are translated into concrete activities and measurable ecological outcomes.

The model assumes a positive direct effect of green organizational culture on product/service, process, organizational, and marketing eco-innovations, as well as a positive effect of eco-innovations on the ecological performance of hotels. At the same time, the model also assumes a direct effect of green organizational culture on ecological performance, arising from internalized organizational values and practices oriented towards environmental protection. Furthermore, an indirect effect through eco-innovations is also assumed, thereby examining their mediating role in transmitting the effect of organizational resources on environmental outcomes. In this study, eco-innovations are operationalised in an aggregated manner, as an indicator of the extent of implementation of different types of eco-innovation activities at the hotel level, thereby enabling a more comprehensive understanding of their application within the hotel sector.

The proposed model integrates organizational, innovation, and ecological aspects of business operations and provides a theoretical framework for understanding how green organizational culture contributes to the ecological performance of hotels both directly and indirectly through the implementation of eco-innovations.

METHODOLOGY

Data collection and sample

This study uses a subsample of three-, four-, and five-star hotels operating in the region of Dalmatia, extracted from a broader empirical study conducted within the hotel sector of the Republic of Croatia. The geographical scope of the study includes the areas of the Zadar, Šibenik-Knin, Split-Dalmatia, and Dubrovnik-Neretva counties. The spatial focus on Dalmatia was selected due to the specific characteristics of the region, marked by high tourism intensity, pronounced business seasonality, and a strong dependence of tourism competitiveness on environmental preservation, the quality of natural resources, and the efficient management of energy, water, and waste, which further emphasises the importance of

TABLICA 1. *Struktura hotela u uzorku*
TABLE 1 *Sample Characteristics of Hotels*

Varijable / Variable	Struktura hotela / Hotel Characteristics	N (73)	%
Veličina hotela / Hotel size /	Mali hoteli / Small hotels	33	45.2
	Srednji hoteli / Medium hotels	24	32.9
	Veliki hoteli / Large hotels	16	21.9
Kategorija hotela / Hotel category	3 zvjezdice / 3-star	21	28.8
	4 zvjezdice / 4-star	46	63.0
	5 zvjezdica / 5-star	6	8.2
Oblik poslovanja / Business form	Nezavisni hoteli / Independent hotels	46	63.0
	Lanac hotela / Hotel chain	27	37.0

Napomena: *Mali hoteli (do 50 soba); srednji hoteli (51 – 200 soba); veliki hoteli (više od 200 soba)* / Note: *Small hotels (up to 50 rooms); Medium hotels (51–200 rooms); Large hotels (more than 200 rooms)*

Izvor: izrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

odgovora korišteni su podsjetnici putem elektroničke pošte i naknadni telefonski kontakti. Ukupno su prikupljena 73 valjana upitnika, što predstavlja stopu odgovora od 23,7 %. U istraživanju su sudjelovali menadžeri, direktori i vlasnici hotela kao osobe s uvidom u strateške i operativne aspekte poslovanja hotela. Struktura uzorka prikazana je u Tablici 1. iz koje je vidljivo da najveći udio čine mali hoteli (45,2 %) i hoteli kategorije četiri zvjezdice (63,0 %), dok većina hotela posluje kao nezavisni objekti (63,0 %).

Ispitanici su prije sudjelovanja bili informirani o svrsi i ciljevima istraživanja. Budući da su podaci prikupljeni metodom samoprocjene i iz jednog izvora, postoji potencijalni rizik zajedničke metode mjerenja (common method bias – CMB). Kako bi se taj rizik ublažio, primijenjeni su proceduralni pristupi preporučeni u literaturi, uključujući osiguravanje anonimnosti i povjerljivosti odgovora te dobrovoljno sudjelovanje ispitanika (Podsakoff i sur., 2003). Istraživanje je provedeno u skladu s relevantnim etičkim smjernicama za istraživanja koja uključuju sudionike.

S obzirom na relativno malu veličinu uzorka, istraživački karakter modela i cilj istraživanja usmjeren na ispitivanje izravnih i posrednih odnosa među varijablama, u analizi podataka primijenjen je pristup parcijalnih najmanjih kvadrata strukturnog modeliranja jednadžbi (PLS-SEM). Odabir PLS-SEM pristupa dodatno je opravdan uključivanjem različitih tipova operacionalizacije varijabli, odnosno reflektiv-

sustainable business practices within the hotel sector.

The sampling frame included all registered hotels within the specified categories, resulting in the identification of a total of 308 hotels (123 three-star hotels, 157 four-star hotels, and 28 five-star hotels). Data was collected using an online survey questionnaire distributed via e-mail to all identified hotels. The study was conducted between June and December 2023, and to increase the response rate, reminder e-mails and follow-up telephone contacts were used.

A total of 73 valid questionnaires were collected, representing a response rate of 23.7%. Hotel managers, directors, and owners participated in the study as individuals with an insight into the strategic and operational aspects of hotel business operations. The sample structure is presented in Table 1, showing that the largest proportion consists of small hotels (45.2%) and four-star hotels (63.0%), while most hotels operate as independent establishments (63.0%).

Prior to participation, respondents were informed about the purpose and objectives of the study. Since the data were collected through self-assessment and from a single source, there is a potential risk of common method bias (CMB). To mitigate this risk, procedural approaches recommended in the literature were applied, including ensuring the anonymity and confidentiality of responses, as well as voluntary participation of respondents (Podsakoff et al., 2003). The study was conducted in accordance with relevant ethical guidelines for research involving human participants.

Given the relatively small sample size, the exploratory nature of the model, and the research objec-

nih latentnih konstrukata (zelena organizacijska kultura i ekološka uspješnost) te agregiranog kompozitnog pokazatelja ekoinovacija, što je u skladu s preporukama za primjenu PLS-SEM pristupa u istraživanjima s relativno manjim uzorcima i modelima koji uključuju različite mjerne specifikacije (Hair i sur., 2019). Dodatno, adekvatnost veličine uzorka procijenjena je u skladu s preporukama za PLS-SEM modeliranje. Prema metodi inverznog kvadratnog korijena (*inverse square root method*) i metodi minimalne veličine uzorka (*gamma-exponential method*) koje predlažu Kock i Hadaya (2018), za modele s ograničenim brojem prediktora može se postići dovoljna statistička snaga i pri manjim uzorcima. Budući da predloženi model obuhvaća jednostavnu strukturu odnosa među konstruktima te maksimalno dva prediktora po endogenom konstrukt, veličina uzorka od 73 hotela smatra se dostatnom za primjenu PLS-SEM pristupa i testiranje postavljenih hipoteza.

Podaci su kodirani i analizirani korištenjem programa Microsoft Excel i SmartPLS. Za procjenu statističke značajnosti putnih koeficijenata primijenjen je *bootstrapping* postupak s 5000 poduzoraka uz dvosmjerno testiranje značajnosti na razini od 5 %.

Mjerenje konstrukata

Zelena organizacijska kultura mjerena je s pomoću čestica prilagođenih iz istraživanja Fraj i sur. (2011) te Wang (2019). Konstrukt obuhvaća četiri tvrdnje koje odražavaju stupanj integracije okolišnih vrijednosti i održivosti u poslovanje hotela. Odgovori su mjereni Likertovom skalom od pet stupnjeva (1 = uopće se ne slažem do 5 = potpuno se slažem).

Ekoinovacije su operacionalizirane u četiri tipa: inovacije proizvoda/usluga, procesa, organizacije i marketinga, u skladu s *Oslo priručnikom* (Oslo Manual) OECD-a i Eurostata, koji je jedan od najčešće korištenih okvira za definiranje i mjerenje inovacija u znanstvenim istraživanjima (OECD/Eurostat, 2005, 2018). Ispitanici su upitani jesu li u razdoblju od 2020. do 2022. godine implementirali navedene tipove ekoinovacija, pri čemu je u upitniku bila uključena

tive focused on examining direct and indirect relationships among variables, the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach was applied for data analysis. The selection of the PLS-SEM approach is further justified by the inclusion of different types of variable operationalisation, namely reflective latent constructs (green organizational culture and ecological performance) and an aggregated composite indicator of eco-innovations, which is consistent with recommendations for applying the PLS-SEM approach in studies involving relatively small samples and models that include different measurement specifications (Hair et al., 2019). Additionally, sample size adequacy was assessed in accordance with recommendations for PLS-SEM modelling. According to the inverse square root method and the gamma-exponential method proposed by Kock and Hadaya (2018), models with a limited number of predictors can achieve adequate statistical power even with relatively small samples. Since the proposed model includes a simple structure of relationships among the constructs and a maximum of two predictors per endogenous construct, the sample size of 73 hotels was considered sufficient for the application of the PLS-SEM approach and for testing the proposed hypotheses.

The data were coded and analysed using Microsoft Excel and SmartPLS software. To assess the statistical significance of path coefficients, a bootstrapping procedure with 5,000 subsamples and two-tailed significance testing at the 5% significance level was applied.

Measurement of constructs

Green organizational culture was measured using items adapted from the studies of Fraj et al. (2011) and Wang (2019). The construct comprises four statements reflecting the degree of integration of environmental values and sustainability into hotel operations. Responses were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Eco-innovations were operationalised through four types: product/service, process, organizational, and marketing innovations, in accordance with the *Oslo Manual* of the OECD and Eurostat, which represents one of the most frequently used frameworks for defining and measuring innovation in scientific research (OECD/Eurostat, 2005, 2018). Respond-

definicija svake vrste. Svaki tip mjeren je dihotomnom varijablom (0 = ne; 1 = da), kojom se utvrđivala prisutnost implementacije pojedinog oblika ekoinovacije u hotelu. Budući da različiti tipovi ekoinovacija ne moraju nužno biti međusobno zamjenjivi niti visoko korelirani, ekoinovacije u ovom radu nisu operacionalizirane kao reflektivni latentni konstrukt, već kao agregirani kompozitni pokazatelj implementacije ekoinovacija na razini hotela. Varijabla ekoinovacija operacionalizirana je kao ukupan broj implementiranih tipova ekoinovacija, pri čemu viša vrijednost označava veći opseg implementacije ekoinovacijskih aktivnosti u hotelu. U skladu s tim, ekoinovacije su u PLS-SEM model uključene kao jedinstveni kompozitni pokazatelj implementacije ekoinovacija (*single-item composite measure*), zbog čega procjena interne konzistentnosti i konvergentne valjanosti, karakteristična za reflektivne mjerne modele, nije bila primjenjiva (Hair i sur., 2019).

Ekološka uspješnost mjerena je s pomoću dviju čestica prilagođenih iz istraživanja Asadi i sur. (2020), koje se odnose na smanjenje negativnog utjecaja na okoliš i smanjenje potrošnje resursa. Odgovori su mjereni Likertovom skalom od pet stupnjeva (1 = značajno se pogoršalo; 5 = značajno se poboljšalo), čime se omogućuje procjena promjena u ključnim ekološkim ishodima poslovanja hotela. Iako se konstrukti često mjere s većim brojem indikatora, korištene čestice obuhvaćaju ključne dimenzije ekološke uspješnosti i korištene su u prethodnim istraživanjima.

REZULTATI

Deskriptivni rezultati implementacije ekoinovacija

Deskriptivni rezultati u Tablici 2. pokazuju da su najzastupljenije ekoinovacije proizvoda/usluga (71,2 %) i procesne ekoinovacije (68,5 %), dok su organizacijske (34,2 %) i marketinške ekoinovacije (38,4 %) implementirane u manjem udjelu hotela. Najveći udio hotela implementirao je dvije vrste ekoinovacija (28,8 %), dok je 24,7 % hotela implementiralo sve četiri vrste.

ents were asked whether they had implemented these types of eco-innovations during the period from 2020 to 2022, with a definition of each type included in the questionnaire. Each type was measured using a dichotomous variable (0 = no; 1 = yes), indicating the presence of implementation of a particular form of eco-innovation within the hotel.

Since different types of eco-innovations are not necessarily interchangeable nor highly correlated, eco-innovations in this study were not operationalised as a reflective latent construct but rather as an aggregated composite indicator of eco-innovation implementation at the hotel level. The eco-innovation variable was operationalised as the total number of implemented types of eco-innovations, whereby a higher value indicates a greater extent of eco-innovation implementation activities within the hotel. Accordingly, eco-innovations were included in the PLS-SEM model as a single-item composite measure of eco-innovation implementation, for which the assessment of internal consistency and convergent validity, characteristic of reflective measurement models, was not applicable (Hair et al., 2019).

Ecological performance was measured using two items adapted from the study of Asadi et al. (2020), relating to the reduction of negative environmental impacts and the reduction of resource consumption. Responses were measured using a five-point Likert scale (1 = significantly deteriorated; 5 = significantly improved), thereby enabling the assessment of changes in key ecological outcomes of hotel operations. Although constructs are often measured using a larger number of indicators, the selected items capture key dimensions of ecological performance and have been used in previous studies.

RESULTS

Descriptive results of eco-innovation implementation

The descriptive results presented in Table 2 indicate that product/service eco-innovations (71.2%) and process eco-innovations (68.5%) are the most prevalent, whereas organizational (34.2%) and marketing eco-innovations (38.4%) have been implemented in a smaller proportion of hotels. The largest proportion of hotels implemented two

TABLICA 2. Distribucija implementacije ekoinovacija u hotelima
TABLE 2 Distribution of the Implementation of Eco-Innovations in Hotels

Varijabla / Variable	Kategorija / Category	N (da)	%	N (ne)	% (ne)
Tip ekoinovacije / Type of eco-innovation	Ekoinovacije proizvoda/usluga <i>Product/service eco-innovations</i>	52	71,2	21	28,8
	Ekoinovacije procesa <i>Process eco-innovations</i>	50	68,5	23	31,5
	Ekoinovacije organizacije <i>Organisational eco-innovations</i>	25	34,2	48	65,8
	Ekoinovacije marketinga <i>Marketing eco-innovations</i>	28	38,4	45	61,6
Broj implementiranih tipova ekoinovacija / Number of implemented eco-innovation types	Nisu uvedene ekoinovacije / <i>No eco-innovations implemented</i>	13	17,8	–	–
	Uveden jedan tip ekoinovacije / <i>One type of eco-innovation implemented</i>	11	15,1	–	–
	Uvedena dva tipa ekoinovacije / <i>Two types of eco-innovation implemented</i>	21	28,8	–	–
	Uvedena tri tipa ekoinovacije / <i>Three types of eco-innovation implemented</i>	10	13,7	–	–
	Uvedena četiri tipa ekoinovacije / <i>Four types of eco-innovation implemented</i>	18	24,7	–	–
	Ukupno / Total	73	100,0	–	–

Izvor: obrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

Procjena mjernog modela

Mjerni model procijenjen je u pogledu interne konzistentnosti, konvergentne i diskriminantne valjanosti, u skladu sa smjernicama PLS-SEM pristupa. Procjena je obuhvaćala analizu pouzdanosti konstrukata, vanjskih opterećenja indikatora te procjenu diskriminantne valjanosti primjenom komplementarnih kriterija.

Interna konzistentnost i konvergentna valjanost

Rezultati pokazuju da reflektivni konstrukti zelene organizacijske kulture i ekološke uspješnosti zadovoljavaju kriterije pouzdanosti (Cronbachov α , ρ_A i kompozitna pouzdanost $> 0,70$) te konvergentne valjanosti (AVE $> 0,50$). Ekoinovacije su operacionalizirane kao agregirani kompozitni pokazatelj koji predstavlja broj implementiranih tipova ekoinovacija. Budući da se ne radi o reflektivnom latentnom konstrukt, procjena pouzdanosti i valjanosti reflektivnih mjernih modela nije bila primjenjiva.

types of eco-innovations (28.8%), while 24.7% of hotels implemented all four types.

Assessment of the measurement model

The measurement model was assessed in terms of internal consistency, convergent validity, and discriminant validity, in accordance with the guidelines of the PLS-SEM approach. The assessment included an analysis of construct reliability, indicator outer loadings, and the evaluation of discriminant validity using complementary criteria.

Internal consistency and convergent validity

The results indicate that the reflective constructs of green organizational culture and ecological performance meet the criteria for reliability (Cronbach's α , ρ_A , and composite reliability > 0.70) and convergent validity (AVE > 0.50). Eco-innovations were operationalised as an aggregated composite indicator representing the number of implemented eco-innovation types. Since eco-innovations do not constitute a reflective latent construct, the assessment of reliability and validity typical of reflective measurement models was not applicable.

TABLICA 3. Mjerni model: pouzdanost, konvergentna valjanost i vanjska opterećenja
 TABLE 3 Measurement Model: Reliability, Convergent Validity and Outer Loadings

Konstrukt / Construct	Opis varijabli / Variable description	Čestica / Item	Opterećenje / Loading	Cronbach α	Rho-a	Rho-c	AVE
Zelena organizacijska kultura (ZOK) / Green organizational culture (GOC)	Zaposlenici razumiju važnost zaštite okoliša / Employees understand the importance of environmental protection	ZOK1 GOC1	0,914	0,954	0,961	0,966	0,878
	Zaštita okoliša je visoki prioritet / Environmental protection is a high priority	ZOK2 GOC2	0,963				
	Zaštita okoliša je važna korporativna vrijednost / Environmental protection is an important corporate value	ZOK3 GOC3	0,932				
	Hotel razvija proizvode/procese koji minimiziraju utjecaj na okoliš / The hotel develops products/processes that minimise environmental impact	ZOK4 GOC4	0,938				
Ekološka uspješnost (EU) / Ecological performance (EP)	Smanjen negativan utjecaj na okoliš / Reduced negative environmental impact	EU1 EP1	0,916	0,816	0,816	0,916	0,845
	Smanjena potrošnja energije / resursa / Reduced energy / resource consumption	EU2 EP2	0,922				

Izvor: izrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

Diskriminantna valjanost

Diskriminantna valjanost procijenjena je primjenom dvaju komplementarnih pristupa: omjera heterotrait-monotrait (HTMT) i Fornell-Larckerova kriterija.

Vrijednosti HTMT omjera za reflektivne konstrukte, uz uključivanje agregiranog pokazatelja ekoinovacija kao opažene varijable, nalaze se ispod preporučenog praga od 0,85, što upućuje na zadovoljavajuću razlikovnost varijabli uključenih u model.

Diskriminantna valjanost reflektivnih konstrukata procijenjena je korištenjem Fornell-Larckerova kriterija. Rezultati potvrđuju zadovoljavajuću razlikovnost između zelene or-

Discriminant validity

Discriminant validity was assessed using two complementary approaches: the heterotrait–monotrait ratio (HTMT) and the Fornell–Larcker criterion.

The HTMT ratio values for the reflective constructs, including the aggregated indicator of eco-innovations as an observed variable, are below the recommended threshold of 0.85, indicating satisfactory discriminant validity among the variables included in the model.

Discriminant validity of the reflective constructs was further assessed using the Fornell–Larcker criterion. The results confirm satisfactory distinctiveness between green organizational culture and ecological performance, whereby the square roots of AVE ex-

TABLICA 4. Diskriminantna valjanost: heterotrait–monotrait omjer
 TABLE 4 Discriminant Validity: Heterotrait–Monotrait Ratio

Konstrukt / Construct	Ekološka uspješnost / Ecological performance	Ekoinovacije / Eco-innovations	Zelena organizacijska kultura / Green organizational culture
Zelena organizacijska kultura / Green organizational culture	0,468	0,618	
Ekoinovacije / Eco-innovations	0,587		
Ekološka uspješnost / Ecological performance			

Izvor: izračun autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

TABLICA 5. *Fornell-Larckerov kriterij*
TABLE 5 *Fornell-Larcker Criterion*

Konstrukt / Construct	Zelena organizacijska kultura / Green organizational culture	Ekološka uspješnost / Ecological performance
Zelena organizacijska kultura / Green organizational culture	0,937	
Ekološka uspješnost / Ecological performance	0,416	0,919

Izvor: izračun autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

ganizacijske kulture i ekološke uspješnosti, pri čemu su kvadratni korijeni AVE veći od pripadajućih korelacija. Budući da su ekoinovacije operacionalizirane kao agregirani pokazatelj implementacije, a ne reflektivni latentni konstrukt, Fornell-Larckerov kriterij za ovu varijablu treba interpretirati s oprezom te se ne smatra primarnim pokazateljem diskriminantne valjanosti.

Procjena strukturnog modela

Strukturni model procijenjen je analizom kolinearnosti, ukupne prilagodbe modela (SRMR), koeficijenta determinacije (R^2) i veličina učinka (f^2).

Kolinearnost među konstruktima procijenjena je s pomoću VIF pokazatelja strukturnog modela. Sve vrijednosti VIF-a bile su niže od preporučenog praga od 3,3, pri čemu je najviša zabilježena vrijednost iznosila 1,586 što potvrđuje izostanak problema multikolinearnosti među konstruktima. Vrijednost standardiziranog korijen srednje kvadratne rezidualne pogreške (SRMR) iznosi 0,046, što potvrđuje zadovoljavajuću razinu prilagodbe modela s obzirom na to da je niža od preporučene granične vrijednosti od 0,08 za PLS-SEM modele.

Kao što je prikazano u Tablici 6., model objašnjava 37 % varijance ekoinovacija, što upućuje na relativno dobru objašnjavajuću snagu modela. Također, 29,5 % varijance ekološke uspješnosti objašnjeno je uključenim varijablama, što se može smatrati umjerenom razinom objašnjenja. Male razlike između vrijednosti R^2 i korigiranog R^2 dodatno potvrđuju stabilnost modela.

Rezultati pokazuju da zelena organizacijska kultura ima velik učinak na implementaciju ekoinovacija ($f^2 = 0,586$). S druge strane, njezin izravan učinak na ekološku uspješnost je malen

ceed the corresponding correlations. Since eco-innovations were operationalised as an aggregated implementation indicator rather than as a reflective latent construct, the Fornell-Larcker criterion for this variable should be interpreted with caution and is not considered the primary indicator of discriminant validity.

Assessment of the structural model

The structural model was assessed through the analysis of collinearity, overall model fit (SRMR), coefficients of determination (R^2), and effect sizes (f^2).

Collinearity among constructs was assessed using the Variance Inflation Factor (VIF) indicators of the structural model. All VIF values were below the recommended threshold of 3.3, with the highest recorded value being 1.586, confirming the absence of multicollinearity issues among the constructs. The Standardized Root Mean Square Residual (SRMR) value is 0.046, indicating a satisfactory level of model fit, as it is below the recommended threshold value of 0.08 for PLS-SEM models.

As shown in Table 6, the model explains 37 % of the variance in eco-innovations, indicating relatively good explanatory power. Furthermore, 29.5 % of the variance in ecological performance is explained by the included variables, which may be considered a moderate level of explanatory power. The small differences between the R^2 and adjusted R^2 values further confirm the stability of the model.

The results indicate that green organizational culture has a large effect on the implementation of eco-innovations ($f^2 = 0.586$). On the other hand, its direct effect on ecological performance is small ($f^2 = 0.020$), while the implementation of eco-innovations exerts a moderate effect on ecological performance ($f^2 = 0.173$).

TABLICA 6. Objašnjena varijanca

TABLE 6 Explained Variance

Endogeni konstrukt / <i>Endogenous construct</i>	R ²	Korigirani R ² / <i>Adjusted R²</i>
Ekoinovacije / <i>Eco-innovations</i>	0,370	0,361
Ekološka uspješnost / <i>Ecological performance</i>	0,295	0,275

Izvor: obrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

TABLICA 7. Veličine učinka

TABLE 7 Effect Sizes

Put / <i>Path</i>	f ²
Zelena organizacijska kultura → ekoinovacije / <i>Green organizational culture → eco-innovations</i>	0,586
Zelena organizacijska kultura → ekološka uspješnost / <i>Green organizational culture → ecological performance</i>	0,020
Ekoinovacije → ekološka uspješnost / <i>Eco-innovations → ecological performance</i>	0,173

Izvor: obrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

(f² = 0,020), dok implementacija ekoinovacija ostvaruje umjeren učinak na ekološku uspješnost (f² = 0,173).

Nakon procjene kvalitete strukturnog modela, u sljedećem koraku testirani su izravni i posredni odnosi među konstruktima radi provjere postavljenih hipoteza.

Testiranje hipoteza

Rezultati testiranja hipoteza za izravne i posredne odnose prikazani su u tablicama 8. i 9.

Izravni učinci

Rezultati strukturnog modela upućuju na pozitivan i statistički značajan utjecaj zelene organizacijske kulture na ekoinovacije ($\beta = 0,608$; $p < 0,001$), čime je potvrđena hipoteza H1. Također, ekoino-

Following the assessment of the structural model quality, the next step involved testing the direct and indirect relationships among the constructs in order to verify the proposed hypotheses.

Hypothesis testing

The results of hypothesis testing for direct and indirect relationships are presented in Tables 8 and 9.

Direct effects

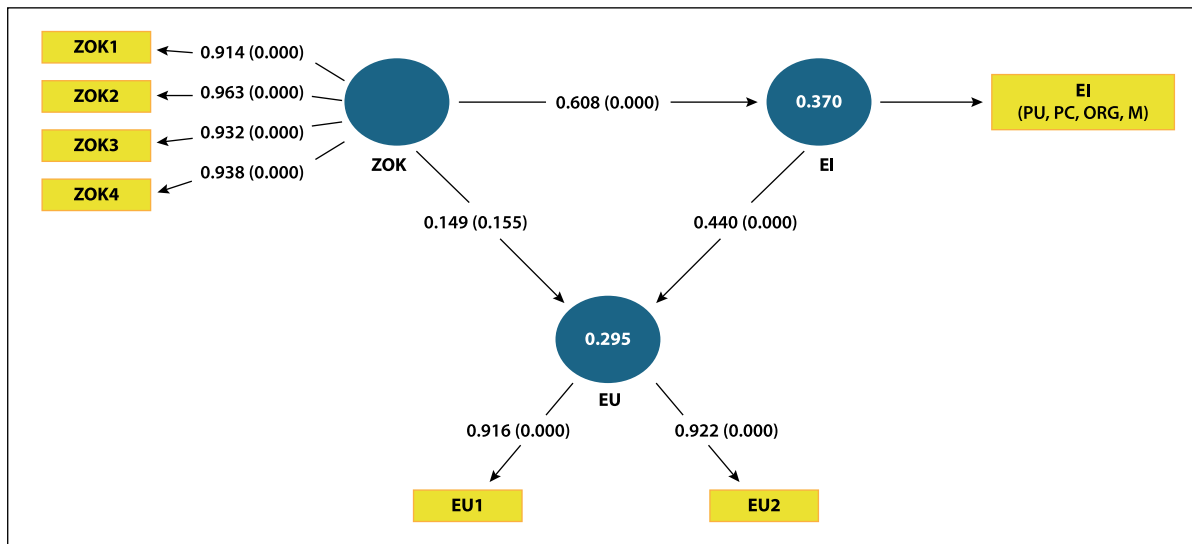
On the one hand, the results of the structural model indicate a positive and statistically significant effect of green organizational culture on eco-innovations ($\beta = 0.608$; $p < 0.001$), thereby confirming Hypothesis H1. Furthermore, eco-innovations have a positive and significant effect on ecological performance ($\beta = 0.440$; $p < 0.001$), confirming

TABLICA 8. Rezultati testiranja hipoteza (izravni učinci)

TABLE 8 Results of Hypothesis Testing (direct effects)

Hipoteza / <i>Hypothesis</i>	Put / <i>Path</i>	B	t	p	Rezultat / <i>Result</i>
H1	Zelena organizacijska kultura → Ekoinovacije / <i>Green organizational culture → Eco-innovations</i>	0,608	8,718	< 0,001	Potvrđena / <i>Supported</i>
H2	Zelena organizacijska kultura → Ekološka uspješnost / <i>Green organizational culture → Ecological performance</i>	0,149	1,422	0,155	Nije potvrđena / <i>Not supported</i>
H3	Ekoinovacije → Ekološka uspješnost <i>Eco-innovations → Ecological performance</i>	0,440	4,033	< 0,001	Potvrđena / <i>Supported</i>

Izvor: obrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results



SLIKA 2. Rezultati strukturnog modela sa standardiziranim koeficijentima putanje (β), p -vrijednostima i R^2
FIGURE 2 Structural Model Results with Standardized Path Coefficients (β), p -values and R^2

Napomena: EI (ekoinovacije) operacionalizirane su kao agregirani kompozitni pokazatelji implementacije različitih tipova ekoinovacija: proizvoda/ usluga (PU), procesa (PC), organizacije (ORG) i marketinga (M) / Note: EI (eco-innovations) represents an aggregated composite measure of the implementation of different types of eco-innovations, including product/service (PS), process (PC), organisational (ORG), and marketing (M) eco-innovations

Izvor: izrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

vacije imaju pozitivan i značajan utjecaj na ekološku uspješnost ($\beta = 0,440$; $p < 0,001$), što potvrđuje hipotezu H3. S druge strane, izravan utjecaj zelene organizacijske kulture na ekološku uspješnost nije statistički značajan ($\beta = 0,149$; $p = 0,155$), zbog čega hipoteza H2 nije potvrđena.

Posredan učinak

Rezultati pokazuju da je posredan učinak zelene organizacijske kulture na ekološku uspješnost putem implementacije ekoinovacija pozitivan i statistički značajan ($\beta = 0,267$; $p < 0,001$), čime je potvrđena hipoteza H4. Budući da izravan učinak zelene organizacijske kulture na ekološku uspješnost nije statistički značajan, dok je posredan učinak značajan, rezultati upućuju na obrazac potpune medijacije implementacije ekoinovacija u odnosu između zelene organizacijske kulture i ekološke uspješnosti.

Hypothesis H3. On the other hand, the direct effect of green organizational culture on ecological performance is not statistically significant ($\beta = 0.149$; $p = 0.155$), and therefore Hypothesis H2 is not supported.

Indirect effect

The results indicate that the indirect effect of green organizational culture on ecological performance through the implementation of eco-innovations is positive and statistically significant ($\beta = 0.267$; $p < 0.001$), thereby confirming Hypothesis H4. Since the direct effect of green organizational culture on ecological performance is not statistically significant, while the indirect effect is significant, the results indicate a pattern of full mediation of eco-innovation implementation in the relationship between green organizational culture and ecological performance.

TABLICA 9. Rezultati medijacijskog učinka
TABLE 9 Mediation Effect Results

Hipoteza / Hypothesis	Put / Path	B	t	p	Rezultat / Result
H4	Zelena organizacijska kultura → Ekoinovacije → Ekološka uspješnost / Green organizational culture → Eco-innovations → Ecological performance	0,267	3,476	<0,001	Potvrđena / Supported

Izvor: obrada autorice prema rezultatima istraživanja / Source: author's calculation based on the research results

RASPRAVA

Rezultati istraživanja pružaju važan doprinos razumijevanju odnosa između zelene organizacijske kulture, ekoinovacija i ekološke uspješnosti u hotelskom sektoru te upućuju na mehanizme putem kojih organizacijski čimbenici pridonose ostvarivanju ekoloških rezultata. Za razliku od pristupa koji ekološku uspješnost promatraju kao izravnu posljedicu organizacijskih vrijednosti, dobiveni nalazi upućuju na složeniji odnos u kojem implementacija ekoinovacija ima posredničku ulogu. Time se dodatno objašnjava način na koji interni organizacijski resursi rezultiraju konkretnim okolišnim učincima.

Rezultati potvrđuju da zelena organizacijska kultura pozitivno i statistički značajno utječe na implementaciju ekoinovacija, što je u skladu s prethodnim istraživanjima (Asadi i sur., 2020; Gu, 2023; Roespinoedji i sur., 2019; Wang, 2019). Dobiveni nalaz sugerira da integracija okolišnih vrijednosti u organizacijsku kulturu povećava vjerojatnost implementacije različitih tipova ekoinovacija u hotelima. Budući da su ekoinovacije u ovom istraživanju operacionalizirane kao agregirani kompozitni pokazatelj njihove implementacije, rezultati upućuju na to da zelena organizacijska kultura pozitivno utječe na opseg implementacije više tipova ekoinovacija. Drugim riječima, hoteli s razvijenijom zelenom organizacijskom kulturom skloniji su implementaciji različitih ekoinovacijskih rješenja.

Nadalje, rezultati pokazuju da ekoinovacije imaju pozitivan i statistički značajan utjecaj na ekološku uspješnost hotela, što je u skladu s prethodnim istraživanjima (Alsughayir, 2017; Elzek i sur., 2021; Fatoki, 2021; Marfo i sur., 2024; Tseng i sur., 2013). Ovaj nalaz sugerira da implementacija ekoinovacija predstavlja važan operativni mehanizam putem kojeg hoteli ostvaruju poboljšanja ekološke uspješnosti učinkovitijim korištenjem resursa i smanjenjem negativnog utjecaja na okoliš. Budući da su ekoinovacije u ovom istraživanju operacionalizirane kao agregirani pokazatelj različitih tipova inovacijskih aktivnosti, rezultati dodatno upućuju na to da širi opseg njihove implementacije može pridonijeti boljoj ekološkoj uspješnosti hotela. Time se

DISCUSSION

The findings of this study provide an important contribution to understanding the relationship between green organizational culture, eco-innovations, and ecological performance in the hotel sector, while also shedding light on the mechanisms through which organizational factors contribute to the achievement of ecological outcomes. Unlike approaches that view ecological performance as a direct consequence of organizational values, the findings suggest a more complex relationship in which the implementation of eco-innovations plays a mediating role. This further clarifies the mechanism through which internal organizational resources translate into tangible environmental outcomes.

The results confirm that green organizational culture has a positive and statistically significant effect on the implementation of eco-innovations, which is consistent with previous studies (Asadi et al., 2020; Gu, 2023; Roespinoedji et al., 2019; Wang, 2019). The findings suggest that the integration of environmental values into organizational culture increases the likelihood of implementing different types of eco-innovations in hotels. Since eco-innovations in this study were operationalised as an aggregated composite indicator of implementation, the results indicate that green organizational culture positively affects the extent of implementation across multiple types of eco-innovations. In other words, hotels with a more developed green organizational culture are more inclined to implement a broader range of eco-innovative solutions.

Furthermore, the results demonstrate that eco-innovations exert a positive and statistically significant effect on the ecological performance of hotels, in line with previous research (Alsughayir, 2017; Elzek et al., 2021; Fatoki, 2021; Marfo et al., 2024; Tseng et al., 2013). This finding suggests that the implementation of eco-innovations represents an important operational mechanism through which hotels improve ecological performance by enabling more efficient resource utilisation and reducing negative environmental impacts. Given that eco-innovations were operationalised as an aggregated indicator of different types of innovation activities, the findings further suggest that a broader scope of implementation may contribute to improved ecological performance

naglašava važnost sustavne implementacije različitih tipova ekoinovacija, pri čemu kombinirana primjena inovacija proizvoda/usluga, procesa, organizacije i marketinga može biti učinkovitija od parcijalnog uvođenja pojedinačnih inovacijskih aktivnosti.

Jedan od važnijih nalaza istraživanja odnosi se na činjenicu da zelena organizacijska kultura nije pokazala statistički značajan izravan učinak na ekološku uspješnost, što odstupa od nalaza Wang (2019), Fatoki (2021) te García-Machado i Martínez-Ávila (2019). Ovaj rezultat pruža važan uvid u prirodu odnosa između organizacijskih vrijednosti i ekoloških rezultata. Nalazi sugeriraju da zelena organizacijska kultura, sama po sebi, možda nije dovoljna za ostvarivanje mjerljivih ekoloških učinaka, već primarno djeluje kao organizacijski preduvjet koji potiče razvoj i implementaciju ekoinovacija. Drugim riječima, organizacijske vrijednosti usmjerene na zaštitu okoliša potrebno je pretočiti u konkretne aktivnosti i ulaganja kako bi rezultirale smanjenjem potrošnje resursa i negativnih utjecaja na okoliš. Razlike u odnosu na prethodna istraživanja djelomično se mogu objasniti specifičnostima hotelskog sektora u Dalmaciji. Naime, nalazi mogu upućivati na to da izražena sezonalnost poslovanja i operativna ograničenja otežavaju izravno pretvaranje zelenih organizacijskih vrijednosti u mjerljive okolišne rezultate ako nisu podržani sustavnom implementacijom ekoinovacija. Dodatno, izostanak izravnog učinka može biti povezan i s načinom mjerenja ekološke uspješnosti, koja se temelji na subjektivnim procjenama ispitanika, kao i s mogućim vremenskim odmakom između razvoja organizacijske kulture i ostvarenja mjerljivih okolišnih učinaka.

Rezultati medijske analize dodatno potvrđuju ovu interpretaciju, jer pokazuju da je posredan učinak zelene organizacijske kulture na ekološku uspješnost putem ekoinovacija pozitivan i statistički značajan. S obzirom na to da izravan učinak nije značajan, dok je posredan značajan, rezultati upućuju na obrazac potpune medijacije u ovom uzorku. Dobiveni rezultati pokazuju da zelena organizacijska kultura ne ostvaruje izravan učinak na ekološku uspješnost,

in hotels. This highlights the importance of systematically implementing different types of eco-innovations, whereby the combined application of product/service, process, organizational, and marketing innovations may be more effective than the partial adoption of individual innovation activities.

One of the significant findings of this study relates to the fact that green organizational culture did not demonstrate a statistically significant direct effect on ecological performance, which deviates from the findings of Wang (2019), Fatoki (2021), and García-Machado and Martínez-Ávila (2019). This result provides important insight into the nature of the relationship between organizational values and ecological outcomes. The findings suggest that green organizational culture may not be sufficient to achieve measurable ecological outcomes but rather functions primarily as an organizational precondition that stimulates the development and implementation of eco-innovations. In other words, organizational values oriented towards environmental protection must be translated into concrete activities and investments in order to result in reduced resource consumption and diminished environmental impacts.

The divergence from previous studies may be partially explained by the specific characteristics of the hotel sector in Dalmatia. More specifically, the findings may indicate that pronounced business seasonality and operational constraints hinder the direct translation of green organizational values into measurable environmental outcomes unless they are supported by the systematic implementation of eco-innovations. Furthermore, the absence of a direct effect may also be associated with the measurement of ecological performance, which is based on respondents' subjective assessments, as well as with a potential time lag between the development of organizational culture and the achievement of measurable ecological outcomes.

The results of the mediation analysis further reinforce this interpretation, demonstrating that the indirect effect of green organizational culture on ecological performance through eco-innovations is positive and statistically significant. Given that the direct effect is not significant, while the indirect effect is significant, the findings indicate a pattern of full mediation within this sample. The results demonstrate that green organizational culture does not exert a di-

već djeluje posredno putem ekoinovacija. Takav nalaz može se interpretirati u kontekstu prirode organizacijske kulture kao distalne varijable, čiji učinci na uspješnost zahtijevaju operacionalizaciju konkretnim organizacijskim sposobnostima i aktivnostima. U tom smislu, ekoinovacije predstavljaju ključni mehanizam transformacije organizacijskih vrijednosti u mjerljive okolišne rezultate, što je u skladu s pretpostavkama NRBV pristupa.

Rezultate istraživanja potrebno je interpretirati i u kontekstu specifičnosti hotelskog sektora Dalmacije, obilježenog izraženom sezonalnošću i snažnom ovisnošću turističke konkurentnosti o kvaliteti prirodnih resursa. U takvom okruženju, u kojem intenzivna turistička aktivnost tijekom sezone povećava pritisak na energiju, vodu i sustave gospodarenja otpadom, nalazi istraživanja upućuju na to da održivost hotelskog poslovanja ne proizlazi isključivo iz organizacijskih vrijednosti usmjerenih na zaštitu okoliša, već zahtijeva njihovu transformaciju u konkretna inovativna rješenja. Rezultati sugeriraju da hoteli u Dalmaciji bolje ekološke učinke ostvaruju kada zelenu organizacijsku kulturu prevode u inovacije proizvoda/usluga, procesa, organizacije i marketinga koje omogućuju učinkovitije upravljanje resursima.

Teorijski, rezultati istraživanja pružaju dodatnu empirijsku potporu pretpostavkama RBV i NRBV pristupa. U skladu s RBV teorijom, zelena organizacijska kultura može se smatrati vrijednim i teško imitabilnim internim resursom koji potiče razvoj organizacijskih sposobnosti. Međutim, rezultati posebno naglašavaju važnost NRBV perspektive, prema kojoj organizacijski resursi ne djeluju izravno na uspješnost, već svoj učinak ostvaruju putem razvoja specifičnih sposobnosti i inovacija. U ovom slučaju, ekoinovacije predstavljaju upravo takav mehanizam, čime se empirijski potvrđuje transformacijska uloga organizacijskih sposobnosti u povezivanju resursa i okolišnih rezultata.

Osim teorijskog doprinosa, rezultati imaju i značajne praktične implikacije za hotelski sektor. Nalazi jasno sugeriraju da razvoj zelene organizacijske kulture, iako važan, nije dovoljan za postizanje boljih ekoloških rezultata ako nije

rect influence on ecological performance but rather affects it indirectly through eco-innovations. Such a finding may be interpreted in the context of organizational culture as a distal variable, whose effects on performance require operationalisation through specific organizational capabilities and activities. In this regard, eco-innovations represent a key mechanism through which organizational values are transformed into measurable environmental outcomes, which is fully aligned with the assumptions of the NRBV perspective.

The findings should also be interpreted considering the specific characteristics of the hotel sector in Dalmatia, marked by pronounced seasonality and a strong dependence of tourism competitiveness on the quality of natural resources. In such an environment, where intensive tourism activity during the season increases pressure on energy, water, and waste management systems, the findings suggest that the sustainability of hotel operations does not arise solely from organizational values oriented towards environmental protection but requires their transformation into concrete innovative solutions. The results indicate that hotels in Dalmatia achieve superior ecological outcomes when green organizational culture is translated into product/service, process, organizational, and marketing innovations that enable more efficient resource management.

From a theoretical perspective, the results provide additional empirical support for the assumptions of the RBV and NRBV approaches. In line with RBV theory, green organizational culture may be regarded as a valuable and difficult-to-imitate internal resource that fosters the development of organizational capabilities. However, the findings particularly underscore the importance of the NRBV perspective, according to which organizational resources do not affect performance directly but rather exert their influence through the development of specific capabilities and innovations. In this case, eco-innovations represent precisely such a mechanism, thereby empirically confirming the transformational role of organizational capabilities in linking resources to environmental outcomes.

In addition to its theoretical contribution, the findings also carry important practical implications for the hotel sector. The results clearly suggest that the development of green organizational culture,

popraćen konkretnim inovacijskim aktivnostima. Menadžeri hotela trebaju stoga sustavno ulagati u implementaciju ekoinovacija proizvoda/usluga, procesa, organizacije i marketinga. U kontekstu Dalmacije, gdje je očuvanost okoliša ključan resurs turističke konkurentnosti, sposobnost pretvaranja organizacijskih vrijednosti u inovacijske aktivnosti postaje ključan predviđeni dugoročne održivosti i konkurentnosti hotelskog sektora.

ZAKLJUČAK

Rezultati istraživanja potvrđuju da zelena organizacijska kultura ima pozitivan i statistički značajan utjecaj na ekoinovacije, dok ekoinovacije značajno pridonose ekološkoj uspješnosti hotela. S druge strane, izravan učinak zelene organizacijske kulture na ekološku uspješnost nije potvrđen.

Dobiveni nalazi upućuju na to da je zelena organizacijska kultura važan organizacijski resurs, ali da sama po sebi nije dovoljna za ostvarivanje mjerljivih ekoloških učinaka. Njezin doprinos ekološkoj uspješnosti ostvaruje se ponajprije razvojem i implementacijom ekoinovacija, koje djeluju kao ključni operativni mehanizam pretvaranja organizacijskih vrijednosti u konkretne okolišne rezultate. Time se potvrđuje da održivost u hotelskom sektoru nije isključivo rezultat deklarativne predanosti, već zahtijeva sustavnu implementaciju inovacijskih aktivnosti usmjerenih na učinkovitije upravljanje resursima i smanjenje negativnog utjecaja na okoliš.

Rad pridonosi literaturi empirijskom potvrdom mehanizma putem kojeg interni organizacijski resursi djeluju na ekološku uspješnost, u skladu s pretpostavkama RBV i NRBV pristupa. Rezultati posebno ističu transformacijsku ulogu ekoinovacija kao organizacijskih sposobnosti koje povezuju organizacijsku kulturu i okolišne ishode.

S praktičnog aspekta, rezultati upućuju na potrebu da hotelski menadžment održivost ne promatra isključivo putem razvoja organizacijskih vrijednosti, već putem implementacije konkretnih ekoinovacijskih aktivnosti. U kontekstu Dalmacije, gdje je očuvanost okoliša ključan

although important, is not sufficient to achieve improved ecological outcomes unless accompanied by concrete innovation activities. Hotel managers should therefore systematically invest in the implementation of product/service, process, organizational, and marketing eco-innovations. In the context of Dalmatia, where environmental preservation constitutes a key resource for tourism competitiveness, the ability to transform organizational values into innovation activities becomes a critical prerequisite for the long-term sustainability and competitiveness of the hotel sector.

CONCLUSION

The findings of this study confirm that green organizational culture has a positive and statistically significant effect on eco-innovations, while eco-innovations significantly contribute to the ecological performance of hotels. Conversely, the direct effect of green organizational culture on ecological performance was not confirmed.

The findings suggest that green organizational culture represents an important organizational resource. However, it is not sufficient to generate measurable ecological outcomes. Its contribution to ecological performance is achieved primarily through the development and implementation of eco-innovations, which function as a key operational mechanism for translating organizational values into tangible environmental outcomes. This confirms that sustainability in the hotel sector is not solely the result of declarative commitment but requires the systematic implementation of innovation activities aimed at more efficient resource management and the reduction of negative environmental impacts.

This paper contributes to the literature by empirically confirming the mechanism through which internal organizational resources influence ecological performance, in accordance with the assumptions of the Resource-Based View and Natural Resource-Based View approaches. The findings particularly emphasise the transformational role of eco-innovations as organizational capabilities that connect organizational culture with environmental outcomes.

From a practical perspective, the findings highlight the need for hotel management to view sustainability

resurs turističke konkurentnosti, sposobnost pretvaranja zelenih organizacijskih vrijednosti u inovacijske prakse postaje važan preduvjet dugoročne održivosti i tržišne uspješnosti hotela.

Unatoč značajnim nalazima, istraživanje ima određena ograničenja koja je potrebno uzeti u obzir. Relativno mali i geografski ograničen uzorak može utjecati na mogućnost generalizacije rezultata, dok se mjerenje ekološke uspješnosti temelji na percepcijskim procjenama ispitanika. Također, ekoinovacije su operacionalizirane kao agregirani pokazatelj koji ne obuhvaća intenzitet njihove implementacije. Buduća istraživanja trebala bi obuhvatiti veće i raznolikije uzorke, koristiti objektivne pokazatelje ekološke uspješnosti te detaljnije analizirati pojedine tipove ekoinovacija i njihove diferencirane učinke.

Zaključno, rezultati istraživanja upućuju na to da održivost hotelskog poslovanja nije isključivo pitanje organizacijskih vrijednosti, već sposobnosti njihove transformacije u konkretne ekoinovacijske aktivnosti. Time se naglašava važnost organizacijskih sposobnosti kao ključnog mehanizma putem kojeg hoteli mogu ostvariti mjerljive ekološke učinke i dugoročno jačati održivu konkurentnost.

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not exclusively through the development of organizational values but through the implementation of concrete eco-innovation activities. In the context of Dalmatia, where environmental preservation represents a key resource for tourism competitiveness, the ability to transform green organizational values into innovative practices becomes an important prerequisite for the long-term sustainability and market success of hotels.

Despite its significant findings, the study has certain limitations that should be taken into consideration. The relatively small and geographically limited sample may affect the generalisability of the findings, while the measurement of ecological performance is based on respondents' perceptual assessments. Furthermore, eco-innovations were operationalised as an aggregated indicator that does not capture the intensity of their implementation. Future research should include larger and more diverse samples, utilise objective indicators of ecological performance, and provide a more detailed analysis of specific types of eco-innovations and their differentiated effects.

In conclusion, the findings suggest that the sustainability of hotel operations is not solely a matter of organizational values but of the ability to transform these values into concrete eco-innovation activities. This highlights the importance of organizational capabilities as a key mechanism through which hotels can achieve measurable ecological outcomes and strengthen sustainable competitiveness in the long term.

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