SERBIAN WINE SECTOR LEGAL REFORM: CLUSTER INSTITUTIONALIZATION AND PROTECTION OF GEOGRAPHICAL INDICATIONS

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ABSTRACT

The Serbian wine sector is facing a profound structural crisis, despite the existing legal frameworks and strategic documents. The article legally and economically analyzes Serbia's viticulture and wine sector aiming to identify a structural crisis and propose mitigation measures. Four hypotheses are tested using an interdisciplinary methodology encompassing: (1) analyzing 2019-2023 production indicators utilizing UN Food and Agriculture Organization data; (2) a normative analysis of Serbia's current Law on Wine; and (3) a French, Spanish, and Italian institutional model comparative analysis. The results demonstrate a continuous decline in key parameters despite the 2021-2031 Serbian Viticulture and Winemaking Development Program. Furthermore, the findings indicate that current legislation inherits a passive-control model, systematically ignoring producer economic organization. The article concludes that sector's survival requires an urgent legal and strategic revision, targeted at institutionalizing wine clusters and legal geographical indication definition in compliance with EU Regulation 2024/1143.

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Introduction

Wine has historically played a significant role within Serbia, serving not merely as a commercial market commodity, but as an integral cultural lifestyle element, particularly in rural households where climatic conditions permitted viticulture. This production, frequently oriented toward self-consumption, underscores primarily perceiving wine as a food product, an essential dietary component, and a family custom, rather than an alcoholic beverage. This conceptualization is reinforced by the current Serbian Law on Wine, which defines it as an "agricultural-food product" (Art.5, paragraph 4, Law on Wine, 2012), and is scientifically supported by numerous studies highlighting the health benefits associated with moderate consumption (Ilak Peršurić et al., 2023).

Serbian viticulture and winemaking constitute a major economic sector possessing substantial further development potential. Despite a continuous, long-standing legal tradition, including enacting the first Law on Wine in 1929, the viticultural and wine sectors face numerous challenges. These challenges encompass legal, economic, and social dimensions, thereby requiring a comprehensive, multidisciplinary approach given the complex nature of wine, spanning agricultural production to commercial trade. Addressing these intricate issues necessitates robust theoretical legal frameworks to guide sector reforms. Within recent literature, particularly concerning the Western Balkans, systematic viticultural legal aspect studies remain rare (Ducman et al., 2023).

Historical regulatory continuity demonstrates that the state has consistently treated wine as a strategic product, a revenue source, a stability factor, and a cultural identity element. Nevertheless, this continuity underscores an ongoing struggle between formal regulations and market reality. Within the medieval Serbian state, the regime's relationship of wine was primarily economically motivated. King Stefan Milutin's 1300 Charter established an early trade monopoly, granting the Monastery of Saint George exclusive wine retailing rights (Stojičić, 2002). This public law intervention was expanded via Dušan's Code, which protected vineyards as "noble property" while imposing strict sanctions for damaging them (Solovjev, 1980). Consequently, wine became permanently established as a legal asset possessing exceptional state importance under detailed state control (Blagojević, 1973).

This approach persisted throughout the 19th century. The 1844 Serbian Civil Code (SCC) distinguished wine and vineyards as specific, alienable, and inheritable property. Wine escaped standard household chattel classification, thereby enabling free circulation subject to a distinct contractual obligation requiring a "wine-tasting" condition (Art. 574 and 645, SCC). Subsequently, the 1882 phylloxera crisis accelerated regulatory framework formalization. The 1889 viticultural statistics recorded over 43,000 vineyard hectares, confirming this sector as a pivotal economic pillar within the then Kingdom of Serbia (State Statistics of Serbia, 1889). This systemic intervention demand yielded the 1921 Vineyard Restoration and Improvement Act (within the Kingdom of SHS) and the 1927 Special Wine Trading Usages (Art. 35), culminating in the 1929 Kingdom of Yugoslavia's first specialized Law on Wine. However, a profound rift between the

legislative framework and market reality emerged immediately through the so-called Yugoslav Wine Trade Crisis, characterized by lack of competitiveness and inefficient state agreements (Savić et al., 2022). This historical precedent demonstrates that legislation alone remains ineffective lacking flexible mechanisms enabling producers' collaborative market action.

Regional wine history reflects an ongoing legal dialogue conditioned by wine's dual nature as both a luxury commodity and an essential food product (Jovanović, Atanasovska Cvetković, 2022). This ambivalence compels state intervention to balance fiscal interests against commodity quality and origin protection (Jovanović, 2022). This historical constant – wine acting simultaneously as a fiscal object and a protected asset – solidified a reactive administrative control model rather than market development support. The aforementioned historical-legal sources remain relevant because they prove that this matrix (monopoly, surveillance, sanctions) persist today, explaining why current legislation continues emphasizing control over producer economic organization. However, while leading European wine-producing nations pivoted toward association and innovation models, Serbian regulations, via the 1973, 1994 and 2009 laws on wine, retained this anachronistic, fiscal-control approach.

Hence, this study originates from analyzing the viticultural and wine production structural crisis, alongside grape variety structural dynamics, to highlight imperative systemic solutions. By executing a critical current Law on Wine review and incorporating comparative European model insights, this research identifies key industry challenges and offers concrete, legally grounded solutions. The article's core thesis argues that the Serbian wine sector's structural crisis stems from a strategic desynchronization between the historically embedded fiscal-control regulatory model and modern market demands, therefore, the solution requires wine cluster institutionalization and legal geographical indication definition. The research significance is threefold: theoretical (strategic desynchronization concept), empirical (documenting declining 2019-2023 production indicators), and normative (providing concrete Law on Wine amendment proposals inspired by three successful models while harmonizing with EU Regulation 2024/1143).

This study's primary subject encompasses a legal-economic analysis targeting the Republic of Serbia's viticultural and wine sector, operationalized through the following objectives: (a) determining the existence and structural scope of the Serbian viticultural and wine sector crisis based on 2019-2023 production indicators; (b) conducting a critical Law on Wine normative analysis to identify systemic regulatory deficiencies; (c) evaluating French, Spanish, and Italian institutional models comparatively; and (d) formulating concrete Law on Wine amendment proposals to enable cluster institutionalization and geographical indication protection.

This study addresses the following primary research question: Why does the Serbian viticultural and wine sector, despite possessing a formal regulatory framework and strategy, experience a continuous decline in key production parameters, and which

institutional mechanisms could halt this crisis? Extant literature surrounding Serbia's viticultural and wine sector predominantly addresses agrotechnical and geographical aspects, thoroughly neglecting an interdisciplinary legal-economic regulatory framework analysis and institutional reform. Consequently, this paper fills this exact gap.

Based on the presented thesis, this study tests the following hypotheses:

H1: There is a justified assumption that the continuous decline in key production parameters within the Serbian wine sector (2019-2023) is linked to a structural mismatch between the historically rooted fiscal-control regulatory model and modern market demands, with this mismatch manifesting through the absence of institutional mechanisms to encourage producer economic organization

H2: The current Law on Wine contains a legal vacuum, the complete absence regarding producer economic organization provisions, rendering it incapable of stimulating cluster development.

H3: Introducing mandatory producer membership (inspired by French, Spanish and Italian models) for those using geographical indications creates institutional assumptions for improved internal quality control and market presence coordination, thereby, alongside other factors (such as marketing strategy, vintage quality consistency, production technology modernization), enhancing Serbia's overall market position.

H4: A value-based financing model (turnover percentage and certification fees) represents an economically more equitable framework compared to the existing vineyard area-based model, while its stimulative effect on producer behavior remains a premise requiring empirical verification through future research.

Following these hypotheses' verification through production indicator analysis, alongside normative and comparative reviews, the final section deduces conclusions and proposes concrete Law on Wine amendments.

Materials and Methods

Aligned with the hypotheses (H1-H4), this study implements an interdisciplinary approach enabling their verification through four interconnected steps: (1) an empirical structural crisis diagnosis; (2) a current Law on Wine normative analysis; (3) a comparative French, Spanish and Italian institutional model review; and (4) formulating *de lege ferenda* reform proposals.

Hypothesis H1 (arguing that strategic desynchronization causes the crisis) is tested by analyzing 2019-2023 production indicators based on official United Nations Food and Agriculture Organization (FAO) data and the 2023 Statistical Office of the Republic of Serbia Agriculture Census. Calculated absolute and percentage changes in harvested areas, yields, alongside grape and wine production (Table 1) enable trend determination and subsequent linkage to the regulatory character.

Hypothesis H2 (identifying a Law on Wine legal vacuum) is verified through a normative content analysis addressing the current Law on Wine provisions ("Official Gazette of Republic of Serbia" no. 41/2009 and 93/2012). The provisions are categorized into thematic unit (technical conditions, control, geographical indication and producer organization). Special attention targets determining the existence regarding producer economic organization provisions, whose absence constitutes a legal vacuum.

Hypotheses H3 and H4 (addressing institutional reform and the financing model) are tested utilizing the comparative method. A comparative analysis converting three leading EU wine-producing countries (France, Spain and Italy) was executed, based on primary legal sources, *Code rural et de la pêche maritime*, *Ley* 24/2003 and *Legge* 238/2016, alongside the new EU Regulation 2024/1143, whereby H3 does not claim that the analyzed institutional mechanisms are sole factors influencing quality and market position, but rather evaluates their significance within the overall regulatory framework, acknowledging other relevant factors (agrotechnical, climatic, economic, marketing). The H4 comparative analysis contrasts the area-based and value-based financing models. The proposed model appears more equitable (burden proportional to turnover), whereas its stimulative effect is excluded from empirical testing due to data limitations, remaining at a theoretical level. The benchmarking criteria encompass: the geographical indication protection legal basis, institutional bodies (*ODG, Consejos Reguladores, Consorzi di tutela*), mandatory membership, control mechanisms, financing models and sanction systems. This process identifies best practices capable of inspiring Serbian legislative amendments.

Synthesizing all hypotheses' verification results, the final section formulates concrete *de lege ferenda* Law on Wine amendment proposals (incorporating a new Article 6a, Producer Consortiums, Control Councils, mandatory membership, dual-source financing utilizing a 0.5-1% turnover percentage alongside certification fees and a designation right revocation mechanisms).

Research limitations include missing 2023 wine production data within the FAO database alongside a complete official data absence regarding all indicators 2024 and 2025.

Results and discussion

Empirical Analysis

The central research finding, empirically confirming deep-seated Serbian viticulture and winemaking structural issues, is summarized in Table 1. This table presents fundamental production indicator dynamics for 2019-2023, utilizing current official FAO Serbia data to render the structural degradation trend indisputable. The analytical framework also encompasses the initial three years of the Republic of Serbia Viticulture and wine Production Development Program (2021 – 2031) implementation ("Official Gazette of the Republic of Serbia" no. 154, December 23, 2020), thereby facilitating the initial impact assessment.

Table 1. Serbian Viticulture and Wine Production Structural Crisis (2019-2023)

Year	Harvested Area (ha)	Grape Yield (kg/ha)	Grape Production (t)	Wine Production (t)
2019	20 501.0	7 976.0	163 515.0	30 184.0
2020	19 840.0	8 080.0	160 307.0	27 273.0
2021	20 113.0	7 742.0	155 718.0	26 550.0
2022	19 973.0	8 135.0	162 481.0	25 982.0
2023	18 349.0	7 168.0	131 526.0	-
Variance (2019 – 2023)	↓ - 2 152 ha	↓ - 808 kg/ha	↓ - 31 990 t	↓ - 4 202 t (2019 – 2022)
Percentage Variance %	↓ - 10. 5%	↓ - 10.1%	↓ - 19. 6%	↓ - 13. 9% (2019 – 2022)

Source: Food and Agriculture Organization (FAO) https://www.fao.org/faostat/en/#data/QCL; Authors' analysis

Distinct from occasional bad-year weather oscillations, the five-year series (2019-2023) uncovers three deep-seated structural issues:

First, a continuous rather than temporary key indicator decline – affecting harvested areas, yields, and overall grape and wine production, removes individual poor seasons as a primary cause. The crisis manifests through a threefold continuous decline: harvested area contraction (-10.5%), production efficiency deterioration (yields decreasing by 10.1%), alongside a total grape (-19.6%) and wine (-13.9%) production collapse.

Second, the simultaneous resource volume, production efficiency and ultimate output decline evidences a general sector-wide degradation rather than isolated, standalone issues.

Third, these negative trends persisted even after the 2021-2031 Development Program adoption, with 2023 recording the most drastic contraction, reducing harvested area to 18 349 ha, yields to 7 168 kg/ha and grape production to 131 526 t. Despite identifying fundamental deficiencies (land fragmentation, low yields, together with a weak market position) and establishing noble goals, the Program fails to deliver operational legal and institutional execution mechanisms. Consequently, the existing strategic framework leaves the core crisis causes unaddressed, remaining a mere declaration. Accordingly, an incentive structure oriented toward *status quo* maintenance rather than strategic restructuring and innovation support emerges as the entire regulatory system's fundamental flaw. Ultimately, these empirical indicators represent the systemic structural crisis's quantifiable manifestation.

Table 1 results provide an empirical basis supporting hypothesis H1: the observed continuous decline in harvested area (-10.5%), yield (-10.1%), and grape (-19.6%), and wine production (-13.9%) during the 2019-2023 period, despite implementing the 2021-2031 Development Program points to a possible structural mismatch between the historically rooted fiscal-control regulatory model and modern market demands. Although this trend exceeds typical annual fluctuations, pointing to deeper structural

problems, a causal link with the regulatory model cannot be inferred solely from five-year data. Further research addressing other potential factors (climatic, economic, social) is necessary.

The 2023 Agriculture Census (Statistical Office of Republic of Serbia) provides additional confirmation: although Serbia possesses 3 239 734 ha utilized agricultural area (UAA), orchards and vineyards constitute a mere 6.62% within this territory. Non-Geographical Indication (non-GI) varieties dominate the structure (57%), whereas geographical indication (GI) varieties account for barely 16% (Table 2). This structural division further illuminates the sector's market position, reflected in an orientation toward non-GI production, standing in direct contrast with contemporary market demands.

Table 2. Grape Variety Structural Distribution (2023)

Variety Classification	Percentage
Non-Geographical Indication (non-GI) Varieties	57%
Geographical Indication (GI) Certified Varieties	16%
Table Grapes	24%
Other Purpose Grapes	3%
Total	100%

Source: 2023 Agricultural Census, Statistical Office of the Republic of Serbia, Belgrade 2024 https://popispoljoprivrede.stat.gov.rs/media/31092/brosura-srpski-sa-koricom.pdf

Table 2 illustrates the grape varieties structure. As demonstrated, nongeographical indication (non-GI) varieties heavily dominate, whereas the geographical indication (GI) varieties remain relatively low.

Current Wine Law normative analysis: structure, deficiencies and consequences

Diagnosis reveals a paradox: a detailed piece of legislation meticulously controlling individual producer technology inherently ignores comprehensive sector' economics. This legal vacuum, the absolute lack of provisions enabling or encouraging producer economic organization, is directly responsible for chronic fragmentation and an inability to establish a strong national brand. Therefore, the strategic reform essence lies not in adding further technical regulations, but rather in expanding and reorienting the regulatory framework itself.

The Serbian wine producers may register under various statutory forms provided by the Companies Act aiming at a for – profit purpose (Art. 2, Companies Act, "Official Gazette of the Republic of Serbia" no. 36/2011, 99/2011, 83/2014 – other law 5/2015, 44/2018, 95/2018, 91/2019, 109/2021 19/2025). The most common organizational forms include: sole proprietorship, limited liability company (LLC) or registered agricultural entity. According to Business Registers Agency (BRA) data, Serbia currently lists 491 registered entities (legal entities and entrepreneurs) with wine production as their primary business. This relatively small producer count could facilitate organized association (what leading European wine nations term a cluster),

however, this remains unachieved due to lacking legal incentives and institutional support frameworks.

In Serbian jurisprudence, wine is regulated through separate law, the Law on Wine ("Official Gazette of the Republic of Serbia", nos. 41/2009 and 93/2012). This law maintains *lex specialis* status relative to general regulations, meaning other statutory provisions apply only where the Law on Wine does not regulate otherwise. Crucially, the Law on Indications of Geographical Origin ("Official Gazette of the Republic of Serbia", nos. 18/2010 and 44/2018) explicitly excludes wine (Art. 1), leaving wine geographical origin protection (GOP) entirely within the Law on Wine's purview. This legal disparity yields far-reaching consequences – the Law on Wine framework fails to fully or adequately establish GOP system. Without a clear definition, neither adequate wine protection nor commercial GI exploitation as a market positioning tool remains possible. Namely, Article 33 prescribes specific GI wine categories, emphasizing mandatory designations: the primary geographical indication, the traditional expression (encompassing quality categories and additional designations), and the recognized traditional term. A particular problem stems from the law's structure, which focuses almost exclusively on production processes (Arts. 16-26). These provisions meticulously dictate wine production requirements, record-keeping methods, accompanying documentation content, product technical characteristics, and quality control procedures. Such an approach results in chronic sector fragmentation. Although Serbian Business Registers Agency (BRA) records indicate that wine-producing associations exist within every defined Serbian wine region (such as the Winemakers and Viticulturists Association Leskovac, the "Subotica Region" Geographical Indication Association, the "Srem – Fruška Gora" Grape and Wine Producers Geographical Indication Association and the Šumadija Winemakers Association), they function merely as interest groups, lacking regulatory and statutory powers to manage GI or enforce quality control. They remain untransformed into executive bodies exercising delegated public powers, contrasting sharply with leading wine-producing nations. Indicatively, the law completely omits provisions regarding: producer economic organization, producer association, joint market entry, collective GI management, unified domestic and international marketing or collective quality responsibility mechanisms. This legal vacuum breeds a systemic asymmetry: the state meticulously regulates wine production, yet fails to erect a legal framework enabling producers to organize economically and penetrate markets collectively. Lacking reliable empirical data, any further causal inquiry would remain strictly speculative.

Alternative approach potential is best illustrated by French, Spanish and Italian examples. In these nations, legal regulations extend beyond technical provisions, creating institutional mechanisms for producer collective action (including quality control, geographical origin protection, and joint market entry). This collective GI management concept is further reinforced by the newly effective EU Regulation 2024/1143, which consolidates previously fragmented wine, agricultural product, and spirit drinks regulations into a unified legal framework. This Regulation explicitly

emphasizes that collectively acting producers possess the necessary authority and responsibility to manage geographical indications (Art. 19, EU Regulation 2024/1143). Consequently, identified Serbian Law on Wine deficiencies gain significance, indicating an urgent legislative intervention necessity.

In this context, the identified Serbian Law on Wine deficiencies gain added gravity, dictating urgent legislative intervention. Hypothesis H2 also stands confirmed: the Law on Wine normative analysis demonstrates absolute absence of provisions producer governing economic organization. This provision gap directly impedes wine cluster development.

Comparative overview: French, Spanish and Italian models

Wine clusters, defined as "geographic concentrations of interconnected companies and institutions within a particular field" (Porter, 1998), represent established practice across leading wine regions, from France, Spain and Italy to California and Chile. Within this context, their significance is emphasized through development potential, identifying innovation and technological learning as central functional concepts within wine producer clusters amidst rapid global wine industry transformation (Bell, Giuliani, 2007).

France provides a model in which the wine cluster concept builds upon the geographical origin protection system and the *Appellation d'Origine Contrôlée* (AOC) framework, regulated by the *Code rural et de la pêche maritime*. Protection and Management Organizations (ODGs) play a pivotal role as a producers' associations with delegated public authority: they draft specifications, participate in control plans and protect both names and territories (Art. L642-17, Code rural). Producers organize into defense syndicates (*Syndicats de défense*) to manage indications, while the National Institute of Origin and Quality (INAO) oversees control through locally delegated commissions (Art. L642-5 – L642-16, Code rural). This AOC system functions not merely as a legal protection framework but as the institutional core for cluster organization. While ODGs ensure collective quality and origin management, the cluster encompasses a broader research, educational and commercial network, collectively enhancing regional competitive potential (Baibakova et al. 2013, 10–16). Defense syndicate producers collaborate with research centers, creating the synergy underpinning French winemaking competitiveness (Fontagné et al. 2010, 3 – 24).

"The wine sector holds a prominent position within the Spanish agrifood industry, for both the quality and the variety of its production" (Marco-Lajara et al. 2022, 1). This standing is facilitated by the Ley 24/2003 de la Viña y del Vino statutory framework establishing the geographical origin protection system. Spanish legislation delegates significant competencies to Autonomous Communities, while the Ministry of Agriculture (MAPA) ensures national coordination. Managing designations of origin, *Denominación de Origen* (DO) for quality wines and *Denominación de Origen Calificada* (DOCa) for elite regions maintaining consistent high quality for at least ten years, is entrusted to Regulatory Councils (*Consejos Reguladores*). These councils

maintain registries, draft specifications, enforce compliance, promote indications and collaborate with research institutions (Art. 25–27, Ley 24/2003). *Consejos* membership for all protected indication producers ensures uniform quality standards. Research confirms the positive *Consejos* activity impact on export performance (Depetris-Chauvin, Fernández-Olmos, 2024), as Spanish wine clusters grow through collective brand reputation (Marco-Lajara et al. 2022). Synergy remains evident: while *Consejos* provide collective quality and origin management, clusters encompass a broader research and commercial network forging regional competitive potential.

Italy applies a similar institutional model, where the wine sector pioneered geographical origin protection development, establishing the regulatory foundation subsequently expanded to all food products (Gori, Alampi Sottini, 2014). This legal regime is codified through *Legge* 238/2016 (*Testo Unico del Vino*), ensuring designation management, *Denominazione di Origine Controllata* (DOC) and *Denominazione di Origine Controllata e Garantita* (DOCG), the latter requiring a mandatory state seal per Art. 48, *Legge* 238/2016, for Protection Consortia (*Consorzi di tutela*). Such legislation transformed consortia into interbranch organizations with expanded competencies encompassing specification drafting, inventory management, brand protection and supply-demand alignment projects (Gori, Alampi Sottini, 2014). A defining Italian model feature, established by Art. 64 (*Legge* 238/2016), is the strict management separation from technical verification. Independent control bodies (*Organismi di controllo*) conduct verification, eliminating conflict of interest and enabling consortia to act as strategic collective brand managers protecting product territorial integrity. Economic indicators confirm this model's positive impact: protected origin wines dominate Italian retail chains, as the protection system allows producers to transcend marketing strategy differences and achieve superior market performance (Dominici et al., 2024). *Consortia* – independent controller synergy ensures an unbreakable product – technology – territory link, rendering the Italian wine sector a global competitiveness leader (Casini et al., 2020).

These systems evolved over decades, building upon high social capital and trust levels. Their absence in Serbia represents a severe development obstacle, surmountable only by establishing clear success principles: a strict management – control separation, financial viability, precise and adequate regulation and wine cluster institutionalization.

A French, Spanish and Italian model comparative analysis supports Hypothesis H3. Establishing mandatory membership within producer consortia (Italy), regulatory councils (Spain) or defense syndicates (France), alongside independent control body existence, is among the pivotal institutional factors in successful geographical indication management. Consequently, deploying similar institutions, a Producer Consortium and Viticultural Control Councils, could significantly elevate Serbian wine quality and market positioning. Therefore, the proposed institutional mechanisms are recommended as a necessary, yet insufficient condition for sector advancement, given the influence of other factors (agrotechnical, climatic, economic, marketing) that likewise determine these parameters.

Strategic Reform Proposal: Cluster Institutionalization and Geographical origin indications

A French, Spanish and Italian prominent geographical origin and institutionalization model comparative analysis indicate shared successful GI management elements: a clear legal definition, institutionalized producer bodies wielding concrete competencies and independent quality control. Legitimacy within such models stems precisely from intertwined internal membership support and external state institution recognition (Cusin, Loubaresse, 2020). Harmonizing Serbian legislation with European standards is vital, as Serbian wine geographical origin designation remains dogmatically undefined and limited to passive administrative control. These comparative insights dictate specific Law on Wine regulatory reform proposals.

The current Serbian Law on Wine reveals a highly centralized, administrative-fiscal control model rather than a proactive developmental framework. Under the positive legal framework, Articles 27-29 and Articles 38-43, the state maintains an absolute monopoly over quality testing, sensory evaluation and geographical origin verification. The domestic framework nominally regulates geographical origin designations through production elaborates (Art. 39), mandatory state verification and regional inspectorates within the Ministry of Agriculture. This mechanism functions as a reactive technical administration, thereby constituting a strict supervisory model wherein control is executed by agricultural inspectors operating under the Ministry. Consequently, this mechanism systematically ignores wine sector economic organization, leaving producers fragmented and structural incapable regarding global market collaborative positioning.

Overcoming this legislative impasse and aligning domestic law under the prevailing EU Regulation 2024/1143 demands a comprehensive legal-strategic reform. The reform would not represent mere duplication of existing administrative restrictions, instead, it introduces a paradigm shift across four pivotal intervention categories. Despite Article 6 precisely defining viticultural areas, provisions enabling producers to organize and collectively manage GI remain absent. Introducing new article, Article 6a, is proposed, defining geographical origin as a distinct, territory-bound legal asset whose specific qualities, reputation, or other essential characteristics are fundamentally conditioned through its natural and human factors. The current legislative approach treats geographical origin primarily an administrative category designated for labeling and oversight under Chapter V. Ergo, this unequivocal, concrete definition transcends the Article 34 technical boundaries, elevating geographical origin protection toward collective intellectual property rights actively managed through the producers themselves, fully complying with Article 19 EU Regulation 2024/1143, which explicitly emphasizes that collectively acting producers must wield the necessary powers and responsibilities to manage geographical indications.

Under the current system, domestic wine associations exist merely as voluntary interest groups holding passive technical roles regarding the elaborate drafting (Art.39). Contrarily, this reform proposes a statutory framework enabling grape and wine

producers within a "protected designation origin geographical area" to establish a Wine Geographical Origin Producers Consortium. Inspired form the Italian *Consorzi di tutela* (Art, 41, Legge 238/2016) and the Spanish *Consejos Reguladores* (Arts. 25-27, Ley 24/2003), this consortium will gain provision recognition as an authorized wine industry-wide designation management body. While prevailing legislation delegates labeling regulation enforcement toward state-appointed external bodies, the proposed Consortium wields direct competencies in technical dossier creation and modification, inventory management, regional brand protection and proactive supply-demand balancing projects. To eradicate the fragmentation paralyzing the Serbian wine market, mandating consortium membership for every winery operating within defined "protected designation origin delimited zones" is necessary, thereby abolishing the previous voluntary membership framework. This shift would establish a unified regional standard, transforming individual competition into collective competitive potential.

The pivotal structural divergence from the current framework lies within the management and control institutional separation. Currently, pursuant to Articles 28, 29 and 38, state-authorized laboratories and directly minister-appointed commissions organize sensory evaluation and quality verification, while the state budget provides direct financial funding (Art.43). This model generates an administrative bottleneck and restricts flexibility.

The proposed reform introduces Viticultural Control Councils acting as autonomous, expertly-guided public enterprises. Relying upon the Italian concept (*Organismi di controllo*, experience pursuant to Legge 238/2016, Article 41, paragraph 5), these Councils must remain strictly separated from the Consortium market promotional activities. Transferring verification authority from state agricultural inspectors toward independent, specialized expert councils relives the state apparatus regarding administrative burdens. Every technical or qualitative violation would trigger immediate, internal council-driven geographical origin designation usage right revocation. Consequently, this mechanism successfully circumvents slow administrative inspection procedures and drastically increases regulatory enforcement efficiency. In this manner, a pivotal shift will be introduced into Serbian positive law. This institutional transition stands in stark contrast to the existing system, which mandates state-driven designation revocation through protracted, retroactive inspection or judicial proceedings after brand damage occurs. In contrast, decades-long successful European practice introduces autonomous, internal, and immediate regional stamp right suspension, thereby safeguarding collective brand reputation before the non-compliant product ever reaches the market.

Current Serbian regional association practice relies upon membership fees paid proportionally regarding each member total vineyard area share. Although this model ensures elaboration drafting stability, it remains economically rigid because it burdens producers based upon static hectares rather than actual market turnover within a given year. Instead regarding this capacity model, the proposed *de lege ferenda* arrangement introduces two aligned funding sources transforming the traditional system into a dynamic, market-value-based model: (a) the first source entails a Consortium members

fee amounting to 0.5% - 1% regarding generated turnover. To prevent revenue concealment, this obligation directly links toward the issued state record stamp volume (Art.31, Para. 3, Law on Wine), whereby the Consortium calculates the amount exclusively based upon the officially approved geographical origin wine quantity and its declared value.; (b) the second source comprises a Control Council certification fee funding physicochemical and sensory analyses per wine batch. This dedicated fee legally relies upon the existing Rulebook on Wine Evaluators List and Evaluator Remuneration Amount (Art. 5 sample-volume-based tariff classes), while institutionally integrating expert bodies from the Rulebook on Wine Sensory Evaluation Procedure and Methods, specifically the Sensory Evaluation Commission and its licensed members, into the decentralized regional cluster Control Councils.

Both fees collection remains conditioned upon the Law on Wine Article 31 record stamp issuance: wineries pay proportionally regarding the stamp-requested batch volume, thereby eliminating the free-rider problem, abolishing the reform utopia and transforming stamps from a mere fiscal tool, serving passive packaging enumeration, into the wine cluster economic self-sustainability primary driving instrument.

Within this decentralized system, the Ministry of Agriculture retains a supervisory role. Pursuant to the Law on Wine, Article 29, paragraph 4, it updates the Evaluators List and reviews the Control Council operational tariff legal compliance, eliminating any prior administrative approval necessity. This mechanism effectively safeguards small family wineries against potential monopolistic deviations.

Table 3. Systematic analysis regarding the current Law on Wine and the *de lege ferenda* proposal for wine geographical indication management

Reform Aspect	Current Serbian Framework	Proposed Reform (*de Lege Ferenda*)
Geographical Origin Legal Definition	Dogmatically undefined.	New Article 6a: Substantive legal definition treating geographical origin as a territory-linked collective intellectual property right.
Producers Institutional Organization	Voluntary associations holding a passive technical role. (Example: Pursuant to its Statute, Association of Winemakers and Winegrowers of Serbia remains a non-governmental, non-profit organization established indefinitely to achieve shared viticultural and vinicultural goals and interests unattainable individually.)	Mandatory Producer Consortium (Based upon the Italian Consorzi di tutela and Spanish Consejos Reguladores frameworks).

Quality Control and Verification	State-driven (Ministry, inspectors, and laboratories).	Viticultural Control Councils – autonomous expert bodies (based upon the Italian *Organismi di controllo* experience); enacting immediate, internal designation revocation.
Funding	Membership fees proportional regarding each member total registered district vineyard area share.	(1) Consortium Membership Fee: 0.5% through 1% regarding generated turnover, directly linked toward state stamps (Art. 31) and digital turnover record inspection. (2) Control Council Certification Fee: calculated utilizing electronic delivery notes.
Ministry Role	Direct command and control enforcement;	Supervisory Function: updating the evaluators list and reviewing operational tariff legal compliance.

Source: Autors' proposals

Hypothesis H4 remains accepted: the value-based funding model (0.5% - 1% regarding generated turnover and certification fees) demonstrates greater economic equity and incentive capacity compared to the current vineyard-area-based model (per hectare). Linking payments toward state record stamp issuance (Law on Wine, Article 31) additionally prevents revenue concealment and eliminates the free-rider problem. Italian experiences confirm that this funding method ensures collective body stability and independence.

Conclusion

Based on the historical context expounded in the introduction, a centuries-old state-driven wine fiscal control model, the conducted empirical, normative and comparative analysis enabled testing the four established hypotheses. As detailed within the "Result and Discussion" chapter, all four hypotheses remain accepted and confirmed, while not neglecting the influence of other potential factors (agrotechnical, climatic, economic, marketing) and the need for further research into comprehensive sector improvement, which leads to recommending supplementary measures from other fields. H1 is not rejected: empirical, normative, and comparative findings support the premise of a structural mismatch between the fiscal-control regulatory model and modern market demands. H2 remains confirmed: the current Law on Wine lacks producer economic organization provisions, permanently obstructing winegrower cluster development. H3 remains accepted: French, Spanish and Italian comparative models indicate the mandatory producer consortium membership and independent control councils represent significant institutional mechanisms capable of enhancing Serbian wine quality and market positioning. H4 is accepted: in terms of economic equity, the proposed financing model (turnover percentage alongside the certification fees) demonstrates advantages

over the existing model by distributing the financial burden more equitably, provided that further research is needed to determine whether and to what extent the proposed model stimulates producer behavior.

Proceeding the aforementioned findings, specific *de lege ferenda* amendments to the Law on Wine are proposed: defining geographical origin (new Article 6a), institutionalizing clusters through mandatory producer consortium membership, establishing an independent Viticultural Control Council, introducing the value-based funding model and enacting the immediate geographical origin designation usage right revocation model.

Implementing the proposed integrated model, Serbian legislation abandons an anachronistic, passive administrative oversight concept and enters a proactive, market-oriented wine sector management phase. This institutional decentralization not only fulfills strict European Union *acquis Communautaire* alignment demands but, through the Producer Consortium and Viticultural Control Council synergy, transforms geographical origin from a bureaucratic category into a powerful economic development mechanism. Simultaneously, the reform paves the way toward full integration into the European geographical origin protection system, aligning domestic legislation with EU Regulation 2024/1143, and establishes foundations regarding self-sustaining wine cluster development, a network comprising producers, research, and educational institutions, thereby reducing costs, fostering knowledge exchange, and facilitating joint domestic and foreign market appearance. This mechanism overcomes structural fragmentation, empowering Serbian winemaking to build a recognizable collective brand and secure equitable market positioning on the global wine map. Wine, as a living history and identity embodiment, deserves strategic state care through a model encouraging, rather than obstructing, its full potential realization as the Serbian cultural and economic identity pillar.

Conflict of interests

The authors declare no conflict of interests.

References:

1. Agencija za privredne registre [in English: Business Registers Agency]. Retrieved from: https://www.apr.gov.rs
2. Baibakova, M., Guilford, M., Lee, J., Sarafa, R., & Weigand, M. (2013). The French Wine Cluster. Harvard Business School. Retrieved from: https://www.isc.hbs.edu/Documents/resources/courses/moc-course-at-harvard/pdf/student-projects/France_Wine_2013.pdf
3. Bell, M., Giuliani, E. (2007). Catching up in the global wine industry: innovation systems, cluster knowledge networks and firm-level capabilities in Italy and Chile, *International Journal of Technology and Globalisation*, Vol. 3, No. 2/3, 2007, 197 – 223. DOI: 10.1504/IJTG.2007.014333

4. Blagojević, M. (1973). Zemljoradnja u srednjovekovnoj Srbiji. Beograd. [in English: Blagojević, M. (1973). Agriculture in medieval Serbia, Belgrade.].
5. Casini, L., Alampi Sottini, V., Dominici, A., Fabbrizzi, S., Gerini, F., Romano, C. (2020). Il mercato del vino nella Grande Distribuzione Organizzata in Italia. Firenze University press. [in English: Casini, L., Alampi Sottini, V., Dominici, A., Fabbrizzi, S., Gerini, F., Romano, C. (2020). The Wine Market in Italian Large-Scale Retail Trade. Florence University press]. Retrieved from: https://www.researchgate.net/publication/342895860_Il_mercato_del_vino_nella_Grande_Distribuzione_Organizzata_in_Italia_Tendenze_2009-2017_e_previsioni
6. Code rural et de la pêche maritime [in English: Rural and Maritime Fishing Code]. Retrieved from: https://www.legifrance.gouv.fr/codes/section_lc/LEGITEXT000006071367/LEGISCTA000006152312/#LEGISCTA000006152312
7. Cusin, J., Loubaresse, E. (2020). La construction de la légitimité d'une initiative de cluster: le cas d'inno'vin, *Finance Contrôle Stratégie*, 23-1. [in English: Cusin, J., Loubaresse, E. (2020). Constructing Cluster Initiative Legitimacy: The Inno'vin Case, Finance Control Strategy 23-1]. Retrieved from: https://journals.openedition.org/fcs/4771?lang=en
8. Depetris-Chauvin, N., Fernández-Olmos, M. (2024). Disentangling the relationships between denomination of origin regulatory councils activities and Spanish wineries' export performance, *Agribusiness*, 2024, 1 – 22. Retrieved from: https://onlinelibrary.wiley.com/doi/10.1002/agr.21966
9. Dominici, A., Gerini, F., Casini, L. (2024). Analysis of performances and trends of PDO wine producers in large retail chains in Italy, Wine Economics and Policy, 2024, 13(1) 127-140. Retrieved from: https://www.researchgate.net/publication/381796023_Analysis_of_performances_and_trends_of_PDO_wine_producers_in_large_retail_chains_in_Italy
10. Državopis Srbije, Statistika vinogradarstva u Kraljevini Srbiji za 1889. godinu, Sveska XIX, Beograd. [in English: Serbian State Description: Kingdom of Serbia Viticulture Statistics for 1889, Volume XIX, Belgrade]. Retrieved from: https://pretraziva.rs/browse/statistika-vinogradarstva-u-kraljevini-srbiji-1889
11. Ducman, A., A., Diaconita, V., Simonca, I., Belciu, A., Corbea, A., M., I. (2023). Government Oversight and Economic Impacts: Sustainability in the Vineyard and the Evolution of Wine Regulations, Trade and Production, Agronomy, 13(12):2991. DOI: https://www.mdpi.com/2073-4395/13/12/2991
12. Fontagné, L., Koenig, P., Mayneris, F., Poncet, S. (2010). Clustering the Winners: The French Policy of Competitiveness Clusters, Centre d'études prospectives et d'informations internationales, No. 2010–18, 3 – 24. Retrieved from: https://www.bruegel.org/sites/default/files/wp-content/uploads/2015/09/EFIGEWP28.pdf

13. Food and Agriculture Organization (FAO) https://www.fao.org/faostat/en/#data/QCL
14. Gori, C., Alampi Sottini, V. (2014). The role of the Consortia in the Italian wine production system and the impact of EU and national legislation, *Wine Economics and Policy*, 2014, 3(1), 62-67. Retrieved from: https://www.researchgate.net/publication/262194428_The_role_of_the_Consortia_in_the_Italian_wine_production_system_and_the_impact_of_EU_and_national_legislation
15. Ilak Peršurić, A., S., Rossi, S., Bestulić, E., Radeka, S. (2023). Perceptions of wine health benefits and effects of wine consumption on well-being, Economics of Agriculture, 70/1, 145 – 167. DOI: https://doi.org/10.59267/ekoPolj2301145S
16. Jovanovic, A., Atanasovska Cvetkovic, A. (2022). Wine as an agricultural and food product: a historical and legal approach, Economics of Agriculture, 69/2, 517-532 DOI: https://doi.org/10.5937/ekoPolj2202517J
17. Jovanović, A. (2022). Combating the criminal offense of tax evasion as a key factor in the fight against the "grey" economy, Ekonomika, 68/4, 81-93. DOI: 10.5937/ekonomika2204081J https://scindeks.ceon.rs/Article.aspx?artid=0350-137X2204081J
18. Legge 238/2016, Testo Unico del Vino, Italia. [in English: Law 238/2016, Italian Consolidated Wine Act]. Retrieved from: https://www.normattiva.it/
19. Ley 24/2003 de la Viña y del Vino, España. [in English: Law 24/2003, Spanish Vine and Wine Act]. Retrieved from: https://www.boe.es/buscar/act.php?id=BOE-A-2003-13864
20. Marco-Lajara, B., Seva-Larrosa, P., Martínez-Falcó J., García-Lillo, F., (2022). Wine clusters and Protected Designations of Origin (PDOs) in Spain: An exploratory analysis, Journal of Wine Research, 33/3, https://doi.org/10.1080/09571264.2022.2110051
21. Popis poljoprivrede 2023. Republički zavod za statistiku. [In English: Agricultural Census 2023. Statistical Office of the Republic of Serbia]. Retrieved from: https://popispoljoprivrede.stat.gov.rs/media/31092/brosura-srpski-sa-koricom.pdf
22. Porter E., M. (1998). Clusters and the new economic of competition, Harvard business review, November – December 1998, 77 – 90.
23. Pravilnik o listi ocenjivača vina i visini nadoknade za rad ocenjivača. „Službeni glasnik RS", broj 31 od 12. aprila 2012, 10 od 14. februara 2017, 121 od 5. oktobra 2020. [In English: Rulebook on the List of Wine Evaluators and the Amount of Compensation for the Work of Wine Evaluators, „Official Gazette of the RS", no. 31 of 12 April 2012, no. 10 of 14 February 2017, no. 121 of 5 October 2020]. Retrieved from: https://pravno-informacioni-sistem.rs/eli/rep/sgrs/ministarstva/pravilnik/2012/31/4/reg

24. Pravilnik o postupku i metodama senzornog ocenjivanja vina, načinu obuke i provere stručne osposobljenosti senzornih ocenjivača. „Službeni glasnik RS", broj 93/2015. [In English: Rulebook on the Procedure and Methods of Sensory Evaluation of Wine, the Method of Training and Verification of Professional Competence of Sensory Evaluators, „Official Gazette of the RS", no. 93/2015]. Retrieved from: https://pravno-informacioni-sistem.rs/eli/rep/sgrs/ministarstva/pravilnik/2015/93/6/reg
25. Program razvoja vinarstva i vinogradarstva Republike Srbije za period 2021–2031. godine („Službeni glasnik RS", broj 154 od 23. decembra 2020). [In English: Wine and Viticulture Development Programme of the Republic of Serbia for the period 2021–2031 „Official Gazette of the RS", no. 154 of 23 December 2020]. Retrieved from: https://pravno-informacioni-sistem.rs/eli/rep/sgrs/vlada/drugiakt/2020/154/1
26. Regulation (EU) 2024/1143 of the European Parliament and of the Council. Retrieved from: https://eur-lex.europa.eu/eli/reg/2024/1143/oj/eng
27. Savez vinara i vinoradara Srbije. [in English: Association of Winemakers and Winegrowers of Serbia]. Retrieved from: https://savezvinara.rs/ and https://savezvinara.rs/wp-content/uploads/2023/03/STATUT-saveza-vinanara-i-vinogradara-Srbije.pdf
28. Savić, S., Čekrlija, S., Milić, Z. (2022). Jugoslovenska trgovinska vinska kriza (1918-1941), Naučno-stručni časopis Svarog 24/2022., 21-36. DOI 10.7251/SVR2224021S [in English: Savić, S., Čekrlija, S., Milić, Z. (2022). Yugoslav Trade Wine Crisis (1918-1941), Svarog Scientific-Professional Journal 24/2022., 21-36.] Retrieved from: https://svarog.nubl.org/wp-content/uploads/2022/10/2.Svetozar-Savic-Sasa-Cekrlija-Zlatibor-Milic-JUGOSLOVENSTA-TRGOVINSKA-VINSKA-KRIZA-1918-1941.pdf
29. Solovjev, A. (1980). Zakonik cara Stefana Dušana 1349 i 1354, Beograd. [in English: Solovjev, A. (1980). The Code of Tsar Stefan Dušan 1349 and 1354, Belgrade].
30. Srpski građansk zakonik, 1844. godine. [in English: Serbian Civil Code, 1844]. Retrieved from: https://www.harmonius.org/sr/pravni-izvori/jugoistocna-evropa/privatno pravo/srbija/Srpski_gradjanski_zakonik_1844.pdf
31. Stojičić, S. (2002). Državnopravna istorija sprskog naroda, Istorijske sveske, Niš. [in English: History of the State and Law of the Serbian People, Historical Volumes, Niš].
32. Zakon o obnavljanju i unapređenju vinogradarstva 1921. godine. [in English: Law on the Restoration and Improvement of Viticulture of 1921]. Retrieved from: https://www.uzzpro.gov.rs/doc/biblioteka/digitalna-biblioteka/Zakon%20o%20obnavljanju%20i%20unapredjenju%20vinogradstva.pdf

33. Zakon o oznakama geografskog porekla, „Sl. glasnik RS“, br. 18/2010 i 44/2018. [in English: Law on Indications of Geographical Origin, “Official Gazette of the RS”, no. 18/2010 and 44/2018]. Retrieved from: https://www.paragraf.rs/propisi/zakon_o_oznakama_geografskog_porekla.html
34. Zakon o privrednim društvima “Sl. glasnik RS”, br. 36/2011, 99/2011, 83/2014 - dr. zakon, 5/2015, 44/2018, 95/2018, 91/2019, 109/2021 i 19/2025. [in English: Companies Act, “Official Gazette of the RS”, no. 36/2011, 99/2011, 83/2014 - other law, 5/2015, 44/2018, 95/2018, 91/2019, 109/2021, and 19/2025]. Retrieved from: https://www.paragraf.rs/propisi/zakon_o_privrednim_drustvima.html
35. Zakon o vinu i rakiji iz 1994. Godine, „Sl. glasnik RS“, br. 70/94 i „Sl. list SRJ“, br. 13/2002 - odluka SUS [in English: Law on Wine and Spirits Law from 1994, „Official Gazette of the Republic of Serbia“, no. 70/94 and „Official Gazette of the FRY“, no. 13/2002 - decision of the SUS]. Retrieved from: http://demo.paragraf.rs/WebParagrafDemo/ZAKON-O-VINU-I-RAKIJI-Sl.-glasnik-RS,-br.-70-94-i-Sl.-list-SRJ,-br.-13-2002-odjluka-SUS.htm
36. Zakon o vinu iz 1929. godine. [in English: Law on Wine from 1929]. Retrieved from: https://www.uzzpro.gov.rs/doc/biblioteka/digitalnabiblioteka/26.02.2025/Zakon%20o%20vinu%201931.pdf
37. Zakon o vinu iz 1973. godine, „Sl. List SFRJ, br. 27/1973“. [in English: Law on Wine from 1973, “Official Gazette of the SFRY, no. 27/1973”]. Retrieved from: https://pravno-informacioni-sistem.rs/arhslgl-sgarh
38. Zakon o vinu, „Sl. glasnik RS“, br. 41/2009 i 93/2012. [in English: Law on Wine, “Official Gazette of the RS”, no. 41/2009 and 93/2012]. Retrieved from: http://demo.paragraf.rs/demo/combined/Old/t/t2012_10/t10_0017.htm
39. Zasebne uzanse za trgovanjem žestom, žestokim pićem i vinom 1927. godine. [in English: Special Usages for Trade in Spirits, Strong Drinks, and Wine of 1927]. Retrieved from: https://www.uzzpro.gov.rs/doc/biblioteka/digitalna-biblioteka/Zasebne%20uzance%20za%20trgovinu%20zestom,%20zestokim%20picem%20i%20vinom.pdf