



COMPARATIVE ANALYSIS OF TURKISH AND EU MARITIME LEGISLATION IN TERMS OF SHIP REGISTRY

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Abstract. This study provides a detailed and thorough comparative analysis of the ship registry legislation in Türkiye and European Union (EU) countries. It places special emphasis on registries in Germany, France, the Netherlands, and Malta. It critically evaluates administrative procedures, legal frameworks and digitalization levels of ship registry systems, with reference to international maritime standards set out in the United Nations Convention on the Law of the Sea (UNCLOS) and the International Maritime Organization (IMO) conventions. This study also highlights both the structural and procedural similarities between Turkish and EU systems as well as key deviations in areas such as registry accessibility and digital integration. Moreover, by identifying possible areas for harmonization, the study highlights the importance of collaborative policy initiatives aimed at enhancing competitiveness and compliance and regional maritime governance with evolving international standards. Findings aim to inform maritime administrators, policy makers and legal practitioners who are endeavouring to modernize ship registry practices and promote regulatory harmonization in the wider European maritime area.

Keywords: Shipping; Turkish Ship Registry; EU Maritime Legislation; Maritime Governance; Digitalisation.

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1. INTRODUCTION

The study highlights both the structural and procedural similarities between the Turkish and EU ship registry systems and key deviations in areas such as accessibility and digitalization.

Ship registration laws constitute an essential part of maritime governance, providing the legal foundation through which states assert control and jurisdiction on the vessels that fly their flags. A particularly critical aspect of maritime governance is the assurance of compliance by those vessels with the international safety, labour, and environmental standards that instruments like UNCLOS mandate. In this respect, the legal frameworks governing ship registration not only keep international trade flowing but also help ensure that the oceans remain safe and sound. The last few years have seen considerable attention devoted to harmonising maritime legislation in the EU.

Even though the literature on maritime governance and ship registry systems is growing, comparative research that systematically examines Turkish legislation and its legislative framework in comparison to EU frameworks is still lacking. Given that EU and Turkish frameworks are supposed to work in tandem, the absence of a structured comparative analysis of these systems is a significant gap in the literature.

This paper aims to analyse critically the ship registration systems in Türkiye and the EU, particularly their similarities and differences. The research question for this study is; how do the ship registration systems in Türkiye and the EU compare in terms of legal framework, operational practices, and adherence to international maritime standards? This question is of particular interest not only because Türkiye is a candidate country for EU membership, but also because both Türkiye and the EU are located in the same maritime region. This makes their systems of maritime governance directly relevant to each other. This paper also compares the ship registration systems in Türkiye and the EU with a focus on two particular aspects:

1. the legal bases on which the ship registration systems are established,
2. the digitalisation efforts of the two systems.

2. LITERATURE REVIEW

The critical part of maritime law ensures the comparative configuration of ship register laws based on differing legal systems. This is especially true as the increasingly globalized world seems unable to stem the rise in international shipping. As a consequence

of this open growth, the real-world effects of international regimes, such as UNCLOS, on international shipping can now be assessed. The greatest importance of establishing a legal framework for navigation maritime activities is based on its implementation, universal acceptance, and the fair and effective implementation (Turčinović et al., 2019), making this comparative analysis essential for understanding contemporary maritime governance between Türkiye and EU.

The significance of ship registry legislation extends beyond mere administrative procedures, encompassing fundamental questions of jurisdiction, safety, environmental protection, and economic regulation. The genuine link between a ship and its state of ship registry is the most fundamental element of the principle of freedom of navigation (Kuznietsov, 2021). Kuznietsov (2021) also highlighted the complex legal relationships that underpin modern maritime commerce.

The international maritime legal system provides the inclusive framework within which national ship registry legislation must operate. According to a widespread opinion, the development of the IMO legislation has been especially strengthened after the adoption of the UNCLOS. (Turčinović et al., 2019)

The Turkish approach to ship registration appears to operate within the context of broader regional challenges. Research indicates that coastlines of Pakistan, India, Bangladesh, Türkiye and China account for 95 percent of all ship demolition (Jordan, 2018). International laws and EU regulation on the transboundary transportation of hazardous waste prohibits ships registered under certain flags from docking on these shores through the application of flag of convenience registration.

The EU's maritime legal framework also includes provisions for restrictive measures, though these have raised questions about compliance with international law. The article discusses the restrictive measures imposed by the EU against the Russian Federation within the framework of Regulation No. 833/2014 and prohibiting entry into EU ports by ships flying the Russian flag (Dykhonov, 2025).

The operational procedures for ship registration vary significantly between jurisdictions, reflecting different approaches to balancing efficiency with regulatory oversight. It is emphasized the consequences, the conditions, and the prerequisites, of the registration of seagoing ships in the alternative registries (Kuznietsov, 2021). Both Turkish and EU systems must address these fundamental procedural questions, though their specific approaches reflect different regulatory philosophies. The challenge of flags of

convenience affects both systems, though differently. The negative impact of open registries and flags of convenience on real anchoring powers arises from the business approach taken by both shipowners and flags of convenience to jurisdictional choice (Kuznietsov, 2021). Therefore, eligible registries view the relaxation of requirements as a special service they provide and a competitive advantage over other ship registries. This competitive pressure influences how both Turkish and EU registration systems structure their procedures and requirements. The challenge of maintaining current and accurate registration information affects all systems. The Swiss maritime authorities are currently reassessing the conditions for registering ships (Polić Foglar, 2022).

Both Turkish and EU systems must demonstrate compliance with fundamental IMO conventions and standards. It should also be emphasized that the implementation of these standards must be fully effective, independent of financial constraints, and therefore must be implemented in all parts of the international community (Turčinović et al., 2019). This universal obligation creates a common baseline for evaluating both systems' performance.

The challenge of effective implementation extends beyond mere legal compliance. There are also authorities who are of the opinion that the current legal framework is not suitable for the purpose of regulating autonomous navigation (Dremluiga and Rusli, 2020). While the development of computer systems tends to reduce the need for onboard crew in autonomous ship concepts on digitally managed ships, low levels of cybersecurity mean an increased risk of losing control over the ship.

Both systems must address comprehensive safety and environmental obligations under international law. However, these initiatives mostly focus on ship safety and protection of the marine environment instead of human rights at sea (Galani, 2020). This focus on traditional maritime safety reflects the continuing importance of fundamental regulatory objectives in both systems.

The enforcement of international standards requires complex coordination mechanisms. There are also studies that assess the legal frameworks governing maritime terrorism and piracy, customary international law and national legislation. A critical analysis of the implementation mechanisms in these studies may reveal notable gaps and inconsistencies in legal approaches, particularly with regard to jurisdiction, prosecution and treatment of terrorists and pirates (Osadtsa, 2025). These enforcement challenges affect both Turkish and EU implementation of international standards.

The implementation of maritime labor standards represents a particular area where EU and Turkish approaches may differ significantly. It focuses on example MLC highlight some challenges successes defending rights workers 'decent work' (Sampson, 2022). The EU's more developed social protection framework may provide advantages in implementing these standards compared to Turkish approaches.

The comparative analysis reveals both strengths and limitations in current approaches to ship registry legislation. Some studies have applied the method of comparative scientific research of law of the United States and Canada, presenting the features and practice of law application in North American countries, their similarities and differences (Vlasov and Buev, 2019). This methodological approach provides a framework for understanding how different legal systems address similar regulatory challenges. The research demonstrates significant gaps in international coordination. Legal analysis presented that in the United States and Canada there is no uniform approach to the procedure and the grounds for the arrest of seagoing ships (Vlasov and Buev, 2019). As a result of the analysis, it was concluded that in international practice, it would be appropriate to combine the provisions of the three conventions on the detention of sea vessels and to form a unified convention on the detention of ships by combining maritime requirements (Vlasov and Buev, 2019).

Both systems demonstrate ongoing evolution in response to changing maritime conditions. In response to the development of attractive flags of convenience for merchant ships in international trade, eleven countries established second registries for these vessels during the period 1984-1998. This article reports on and offers a perspective on success levels compared to the actual effect. This pattern of adaptive response to competitive pressures affects both Turkish and EU registration systems (Carlisle, 2009).

The challenge of maintaining regulatory effectiveness while remaining competitive characterizes both systems. Classification societies are one of the primary organisations promoting the highest standards of ship safety and quality shipping (Goh and Yip, 2014). This relationship between safety standards and commercial competitiveness influences both Turkish and EU approaches to registration requirements.

Both systems face emerging challenges from technological evolution in shipping. Some studies also state that existing legal regulations, standards and their drafts do not give due importance to the issue of

cyber security of autonomous ships (Dremluiga and Rusli, 2020). Moreover, existing laws do not provide ways of influencing the behavior of shipowners and shipbuilders to make them use the best methods. These technological obstacles call for both systems to adapt their regulatory frameworks in a way that goes beyond the traditional approaches. The comparative analysis presents that Turkish and EU ship registry legislation work within the same international maritime law framework, but they have different institutional capacities and regulatory approaches.

It is argued that unmanned ship operations are sustainable within the framework of existing international maritime legislation; However, in the issuance of special legislation regarding the operation of unmanned ships, existing legislation should be taken as a basis (Boviatsis and Vlachos, 2022). This observation applies equally to both systems as they confront emerging challenges in maritime technology and regulation.

In order to understand comparative ship registry legislation, several critical areas require further exploration. One is the relationship between registration requirements and enforcement of the 'genuine link' particularly in the context of regional integration versus national sovereignty. Additionally, the impact of technological evolution on traditional registration concepts requires systematic analysis across different legal systems.

The analysis suggests multiple policy implications for the Turkish and EU ship registry systems. Both systems stand to gain from improved coordination to tackle the problems caused by flags of convenience and regulatory arbitrage. They could also profit from a more complex common approach to dealing with the emerging technological challenges of the next few years such as approaches to emerging technological challenges, particularly in autonomous shipping and cybersecurity.

This comparative analysis demonstrates that while Turkish and EU ship registry legislation operate within the same international legal framework, their approach to implementing and enforcing that legislation, as well as their philosophy in regard to ship registry governance, reflects much larger institutional-capacity, regulatory, and policy differences between the two entities. Understanding these differences is necessary for effective international maritime governance and for the continued evolution of ship registration systems in response to changing global conditions.

3. METHODOLOGY

The analysis uses a qualitative comparative legal approach. Primary sources include the Turkish Commercial Code No. 6102, Law No. 4490, Ship Registry Bylaw 2023, and various directives from the EU (Directive 2009/21/EC, 98/41/EC). Also of substantial interest, and constituting a significant layer of the analysis, are the substantial number of directives from the above agencies and materials that set the regulatory framework within which the above primary materials operate (European Maritime Safety Agency (EMSA), 2024; Digital Transport and Logistics Forum (DTLF), 2025; Digital Economy and Society Index (DESI), 2023).

The selection of Germany, France, and Malta countries was based on three primary criteria:

- (i) legal maturity and long-standing registry frameworks within the EU context,
- (ii) variation in registry structure and digitalisation level, and
- (iii) accessibility of primary legal texts and institutional data in English or through official translations.

These countries represent diverse yet representative models within the EU, thereby enabling a more meaningful comparison with the Turkish case.

The maritime digitalisation indicators drawn from these materials aggregate the digitalisation of the sector.

4. FINDINGS

Table 1 presents the results for comparative features of ship registry systems of Türkiye and EU member states and Table 2 presents ship Registry Offices or Competent Authorities in EU Member States and Table 3 presents comparative features of Türkiye's and EU's ship registry systems.

Table 1. Major Ship Registry Offices in Türkiye.

Registry Office Name	Location
Istanbul Ship Registry Office	Istanbul
Izmir Ship Registry Office	Izmir
Mersin Ship Registry Office	Mersin
Samsun Ship Registry Office	Samsun
Çanakkale Ship Registry Office	Çanakkale
Antalya Ship Registry Office	Antalya

Table 2. Ship Registry Offices or Competent Authorities in EU Member States.

EU Country	Ship Registry Office / Competent Authority
Germany	Bundesamt für Seeschifffahrt und Hydrographie (BSH)
Austria	Commercial Courts / Federal Maritime Authority (limited)
Belgium	Belgian Shipping Register (FPS Mobility and Transport)
Bulgaria	Bulgarian Maritime Administration
Croatia	Croatian Register of Shipping (CRS)
Cyprus	Department of Merchant Shipping
Czechia	Commercial Registry Offices / Ministry of Transport
Denmark	Danish Maritime Authority (DMA)
Estonia	Estonian Maritime Administration
Finland	Finnish Transport and Communications Agency (Traficom)
France	French Maritime Registry (Registre International Français – RIF)
Greece	Hellenic Ministry of Shipping and Island Policy
Hungary	Commercial Registry Offices / Ministry of Innovation and Technology
Ireland	Irish Maritime Administration
Italy	Italian Ship Registry (Registro Italiano Navale – RINA)
Latvia	Maritime Administration of Latvia
Lithuania	Lithuanian Transport Safety Administration
Luxembourg	Service de la Navigation
Malta	Malta Maritime Authority
Netherlands	Netherlands Shipping Register (Chamber of Commerce)
Poland	Maritime Office in Gdynia
Portugal	Directorate-General for Natural Resources, Safety and Maritime Services (DGRM)
Romania	Romanian Naval Authority
Slovakia	Commercial Registry Offices / Ministry of Transport
Slovenia	Slovenian Maritime Administration
Spain	Spanish Merchant Marine (Dirección General de la Marina Mercante)
Sweden	Swedish Transport Agency

Table 3. Comparative features of ship registry systems.

Feature	Türkiye	EU Member States
Type of Registry	Turkish National Ship Registry and Turkish International Ship Registry	National registry + some countries have secondary registries (e.g., DIS, GIS)
Legal basis	Law No. 4922 on Life and Property Protection at Sea, Law No. 4490	TFEU Articles 56-62, Regulation 3577/92, Directive 2009/21/EC
Digitalisation	Developing (e-Gov integration in progress)	Advanced (EMSW, SafeSeaNet)
Registration Requirement	Turkish citizen individuals/entities or foreign partnership under certain conditions	EU citizen individuals/entities, with some exceptions
Access to Cabotage	Only Turkish-flagged and Turkish International Ship Registry-registered ships	Only ships flying EU flag and registered in EU

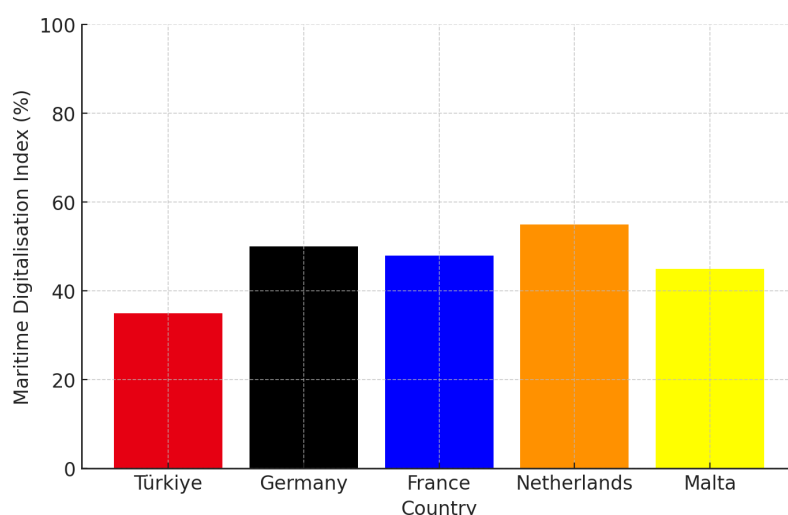


Figure 1. Maritime digitalisation maturity levels in Türkiye and selected EU countries. (Based on: European Maritime Safety Agency (EMSA), 2024; Digital Transport and Logistics Forum (DTLF), 2025; Digital Economy and Society Index (DESI), 2023; data.)

Selected countries' maritime digitalization index presented in Figure 1. Figure 1 indicates the use of digital systems in the maritime sector. Figure 1 represent composite scores from selected indicators (national use of digital registry infrastructure, e-certification, and EU data interoperability mechanisms) that highlight the extent to which digital systems are being used or moving towards implementation in services such as ship registries and maritime administrations. Türkiye shows relatively lower digital integration compared to the EU states.

5. DISCUSSION AND CONCLUSION

Despite Türkiye's incorporation of important international conventions, like those of the IMO and UNCLOS, there are still some areas in which Türkiye's ship registry differs from those of EU member states. For example, while many EU member states have moved to a fully digital, centralised registration system, Türkiye uses a dual system, comprising both national and international registries, and relies to a much greater extent on manual processes. These contrasts suggest several areas for potential further

harmonisation. Table 4 presents a concise summary of key similarities and differences between Türkiye's ship registry framework and that of selected EU member states.

Two primary differences can be identified. First, while EU member states usually distribute e-certificates and permit total online registry access, Türkiye mandates that in-person applications be made for certain specified cases. Second, interoperability (i.e. access to digital data with EU systems) is, at best, limited in Türkiye. Almost total access to digital data with EU systems exists in most EU countries.

The digital transformation plans in Türkiye are underway to implement an electronic registry system of sorts and e-government initiatives. Importantly, the study highlights that both Türkiye and the EU comply with IMO obligations and broadly comparable legal standards that govern the registration of ships. Türkiye favors "more accessible and transparent decision making, in part through better use of technologies," as is the practice in EU states. The more accessible and transparent decision-making process, as well as better use of technologies, is likely to foster further

Table 4. Comparative features of ship registry systems.

Legal Feature	Türkiye	EU Member States
Registry Structure	Turkish National Ship Registry and Turkish International Ship Registry	Usually single national registry
Digital Integration	Partial, limited e-certification	High; centralised digital platforms
IMO/UNCLOS Compliance	Adopted in national law	Fully integrated and operationalised
Data Sharing Mechanisms	Manual or regional	Cross-border interoperable systems

reforms that bring Türkiye in line with EU practices. Collaborative regional initiatives, including joint digitalisation projects and the adoption of common regulatory standards, could strengthen the governance of maritime affairs. There are two reasons: first, these actions would collectively enhance the global maritime competitiveness of Türkiye; and second, they would mutually benefit EU member states. Actions to increase competitiveness and safety serve the collective interests of maritime nations.

Future policy efforts should focus on addressing these gaps through targeted investments in maritime digital infrastructure, capacity building for maritime administrators, and the establishment of bilateral or multilateral frameworks for regulatory cooperation. First, targeted investments should be made in the digital infrastructure of the maritime sector, and second, in the capacities of the human resources working in this sector. Given that Türkiye has a very large coastline, and has major sea traffic, such measures would not only facilitate Türkiye's integration into broader European maritime governance structures but also contribute to the resilience and adaptability of its ship registry system in the face of evolving international maritime challenges.

6. LIMITATIONS

This study is limited by its reliance on descriptive legal comparison. Although relevant laws, regulations, and official documents were examined in depth, no empirical validation (such as stakeholder interviews or procedural observations) was conducted. As such, the interpretations reflect documented frameworks rather than are based on documented frameworks rather than on the real-life operations of those frameworks.

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