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Governance and legitimacy of the national shipping flag: Evidence from Poland

Abstract

Research background and purpose: Maintaining a national fleet under a country's flag is increasingly difficult in globalised maritime transport. Still, many countries support their merchant fleets for strategic, economic or symbolic reasons. Poland's merchant fleet, once among the world's top 20 in the 1980s, now consists of only 14 small, ageing vessels. The article identifies causes of this decline and explores public attitudes toward the importance of a national fleet and willingness to support measures to reduce the cost of maintaining ships under the Polish flag.

Design/methodology/approach: Two research methods were applied: historical and institutional analysis, and a representative survey (n=1001). The first established the context for investigating public opinion on whether Poland should maintain a national fleet and adopt supportive policy.

Findings: Findings show that while the public values a national merchant fleet, it is less inclined to support economic incentives or regulatory changes to sustain it. High employment costs, especially those from Poland's social security system, are the main barrier to competitiveness. In a global context of officer shortages and wage pressure, rebuilding the fleet is desirable but economically challenging. Public support exists, but successful maritime policy requires not only systemic reforms but also better communication with society.

Value added and limitations: The article demonstrates that shipping is important not only from a business perspective, but also from the perspective of the public interest. There is identified a "bottleneck" (indirect labour costs) as the decisive factor in rejecting the Polish registry – the desire for a cost advantage over competitors necessitates the use of an appropriate registry selection strategy. The article portrays shipping as a key element of the supply chain to Europe. The issue of managing human capital with appropriate qualifications is addressed – the shortage of officers and the reasons for their withdrawal from the profession are raised. Also, the article touches on issues related to change management. A limitation of article was the public opinion data are cross-sectional, capturing attitudes at a single point in time. Although the sample was demographically representative, it did not specifically capture the views of key stakeholder groups, such as shipowners, trade unions, maritime professionals, or policymakers.

Keywords: *Polish merchant fleet, social contributions, manning costs, public opinion*

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1. Introduction

Maintaining a merchant fleet under a national flag has long been associated with economic sovereignty, strategic resilience, and national prestige. In the past, countries with strong maritime traditions viewed nationally flagged vessels as symbols of power and independence. Before World War II, Poland had only limited (147 km) access to the sea. It was only after the war that the country's coastline was significantly extended (to 524 km), providing broader opportunities for maritime development (Roe, 2001). By 1989, its merchant fleet was larger than those of France, Turkey, or Canada.

The post-1989 political and economic transformation profoundly altered the landscape for Polish shipping. State-owned fleets, previously shielded from market forces, faced a new reality of competition and commercial viability. Simultaneously, globalisation and technological advances in shipping accelerated. To survive, many Polish shipowners sold vessels or reflagged them to reduce costs. The advantages offered by open registries—lower taxes, flexible employment, and minimal bureaucracy—proved difficult for national registers, including Poland's, to match. Today, only 14 small, ageing vessels remain under the Polish flag (GUS, 2024).

Existing policy tools, such as the tonnage tax introduced in 2006, have failed to reverse this trend (Dz.U. 2006 Nr 183 Poz. 1353, 2006). The primary barrier remains high labour costs, especially mandatory social contributions. Although academic attention has been paid to flag typologies and economic efficiency, little research has explored how national fleets are perceived by the public.

This article addresses that gap by investigating the role of public perception as a potential source of legitimacy for restoring national merchant fleets. While maritime governance literature has expanded over the last two decades—emphasizing multi-level coordination, policy integration, and sustainability—the role of public legitimacy in shaping national maritime policy remains underexplored. Studies on flagging policies tend to focus on legal, fiscal, and competitiveness dimensions, with limited attention to public perception as a source of policy support or constraint (Brooks, 2019; Roe, 2009; Sletmo & Hoste, 1993).

The contribution of this paper lies in bridging this gap. It combines historical-institutional analysis with quantitative public opinion data to assess whether the idea of a national fleet still holds societal resonance in Poland, a post-socialist EU member state with a declining merchant fleet. By applying a mixed-methods approach, the article contributes to three strands of literature:

- (1) maritime governance and policy innovation,
- (2) public sector legitimacy and symbolic politics, and
- (3) maritime labour and national competitiveness in open-flag environments.

To the best of the authors' knowledge, this is the first study to empirically examine societal perceptions of the Polish merchant fleet as a factor of strategic legitimacy within the maritime governance framework.

2. Theoretical background

Previous research on shipping and ship registries has focused primarily on legal and economic issues, such as flag competition and labour costs. Considerably less frequently, the national flag has been considered as a public policy tool and an element of a broader governance system that aligns the interests of the state, the maritime sector (shipowners, seafarers, training institutions), and international organizations. Meanwhile, the governance approach, deeply rooted in public management and administration studies, emphasizes the need for coordination in complex systems, where government operates not in isolation but within networks of interdependencies.

Rhodes (1996) defines governance as a mode of governance in which "The centre depends on the networks for information and for implementing its policies" (Rhodes, p. 660). Kooiman (2009) complements this approach by defining governance as "(...) the entirety of interactions undertaken to solve societal problems and create societal opportunities, including the formulation and application of principles guiding those interactions and care for institutions that enable them" (Kooiman, p. 4).

In the context of the maritime economy, the concept of maritime governance was developed by, among others, Brooks and Pallis (2012) and Roe (2009), pointing to the need for multi-level coordination (EU, national, industry) and shared responsibility for regulations, safety, and the public interest. Governance in this approach encompasses not only formal structures but also relationships, coordination capabilities, and transparency in the decision-making process. As Szumowski and Cyfert's (2018) research shows, implementing good governance principles such as coordination, transparency, and public participation promotes the effectiveness of public actions.

In the case of maritime governance, this means that a single state is not the sole executor of maritime policy. Its effectiveness in achieving its goals is determined by cooperation with maritime industry stakeholders, international organizations (IMO, ILO), regional organizations (EU), and industry-specific organizations in the exchange of information, implementation of regulations, and maintenance of safety standards.

This approach is consistent with broader trends in public management, where the importance of cross-sector partnerships is growing as a tool for strengthening effectiveness and shared responsibility in public policies. As Wyrwa (2018) emphasizes, cross-sector partnerships are becoming an important instrument for implementing community governance and are increasingly used in managing complex economic

sectors. Pachura (2024), in turn, points out that in models based on cross-sector cooperation, building social trust, synergy, and institutional openness is crucial. The classic understanding of the flag was limited to perceiving it as a symbol of sovereignty, and the merchant fleet under the national flag constituted part of the state's transport and logistics resources in crisis situations (Kovats, 2006). Geopolitical changes, globalization processes, and the development of open shipping registers have weakened the links between ships and state jurisdiction, leading to the loss of some of the strategic functions of former national fleets. At the same time, the importance of the seas and oceans as a space for pursuing military, economic, and energy interests has grown, which has been reflected in the development of cooperation within international and regional structures (Łukaszuk & Wiskulski, 2018). Therefore, maintaining a national flag can be considered not only in economic terms but also in the context of economic security and maritime sovereignty, enabling the state to maintain at least a minimal level of operational capabilities in the event of a conflict or transport crisis (Jacuch, 2024; Malus & Usewicz, 2023).

The contemporary approach to maritime governance is moving away from the narrow understanding of the flag as a tool of supervision and control, focusing on its function as a public policy instrument supporting social, environmental, and security goals. As Brooks (2019) points out, national shipping policy should balance the public interest with the needs of the private sector and sustainable development goals. The literature also notes that effective maritime policy requires adaptation to rapidly changing technological and regulatory conditions (Olaniyi et al., 2024), and therefore should be shaped in the spirit of so-called smart regulations, which allow for flexible responses to new environmental and economic challenges. This approach is exemplified by the EU Maritime Security Strategy (European Commission, 2023), which recognizes maritime security as a condition for economic and political stability and emphasizes the need to maintain minimum national transport and logistics capabilities.

The relationship between public opinion and political decisions is well-documented. Burstein's (2003) research shows that governments often tailor their actions to citizens' preferences, especially in areas with high levels of public attention and low political costs: "Public opinion is more likely to affect policy when the issue is salient and when the cost of enacting public preferences is low" (Burstein, p. 29). Hakhverdian (2012), in turn, demonstrates that transparency and institutional stability strengthen states' ability to address public expectations: "In contexts of high institutional transparency and stability, governments are more likely to respond to public preferences" (Hakhverdian, p. 1386).

Page and Shapiro (1983) argue that long-term trends in public opinion have a stronger influence on policy than sudden shifts in sentiment: "When collective preferences shift in a consistent direction over a period of years, the government's policies tend to follow"

(Page & Shapiro, p. 175). In the case of the merchant fleet, this means that stable public support can provide a basis for restoring its importance as a tool for energy, transport, and geopolitical security. Johnston et al. (2017) emphasize that political elites not only respond to public opinion but also shape it through “interpretive frames (Johnston et al., 2017). Despite the growing number of analyses of governance and maritime policy internationally, there is a lack of research that integrates these approaches with the analysis of public opinion as a source of maritime policy legitimacy. To date, no studies have been conducted comparing public perceptions of the merchant fleet with state policy regarding the national flag.

This research gap becomes particularly significant in countries such as Poland, where the importance of the merchant fleet has been reduced as a result of regulatory liberalization, and in the face of a turbulent environment, issues of sovereignty, supply chain resilience, and offshore energy are gaining a new strategic dimension. For the above reasons, maintaining a national flag can be considered an element of sovereignty, combining public interest with economic and military security, and thus an integral component of modern maritime governance. In this model, maintaining a national flag becomes a key element in building trust and shared responsibility in the international maritime governance system.

The question arises: to what extent does society recognize the strategic importance of a merchant fleet under a national flag? What concessions to the shipping sector might it be willing to make to restore a fleet under a national flag? And can public opinion serve as a source of legitimacy for government actions aimed at creating preferential conditions for economic entities, which might enable the renewal of the national merchant fleet?

3. Objectives and hypotheses. Materials and methods

Based on the presented theoretical premises and previous research results, it was assumed that the effectiveness of maintaining the national flag in a globally competitive environment depends not only on economic factors but also on the quality of public governance and the social legitimacy of the decisions made.

Therefore, the following research hypotheses were formulated:

- H1. Coherent and complementary maritime policy instruments (fiscal, social security, and educational issues) strengthen both the competitiveness of the national registry and its social legitimacy as a tool for pursuing the public interest.*
- H2. Effective coordination of maritime policy instruments and actions between the national, EU, and international levels promotes the balance of economic and security objectives.*

- H3. A high level of communication, transparency, and stakeholder participation in the maritime policy process strengthens public trust and the legitimacy of state decisions in the area of shipping.*
- H4. Maintaining the national flag as a public policy instrument requires the simultaneous strengthening of institutional capacity and systemic support for education and human resources in the maritime sector – in response to the effects of the previous liberalization and marginalization of the national fleet.*
- H5. The effectiveness of the national flag maintenance policy depends on the quality of maritime governance mechanisms, including institutional coordination, cooperation with shipping sector stakeholders, and transparency of communication between the national, EU, and international levels.*

The hypotheses formulated are not mutually exclusive – they complement each other, creating a framework for assessing the effectiveness of maritime policy. The study was based on a mixed-method approach, combining qualitative and quantitative analysis. Three groups of data were used:

- historical and institutional material concerning the development and restructuring of the Polish merchant fleet after 1945,
- statistical data on the global maritime labour market, and
- a representative public opinion survey on the perception of the national fleet and maritime policy.

The aim of the study was to identify key factors influencing maintaining the national flag in a globally competitive environment and to assess the social legitimacy of maritime policy. The scope of the analysis encompasses the historical and legal context, institutional issues, cost barriers, and citizen attitudes. According to the study's assumptions, the effectiveness of public policy depends not only on fiscal instruments but also on the quality of governance, social communication, and the perception of the maritime sector as a common good.

The analytical methods employed included a review of archival documents (including UNCTAD and the Central Statistical Office), scientific literature, and data from the Drewry Manning Review 2024/25. These were supplemented by an analysis of the results of a representative survey, described in detail in Section 5.1. Due to the exploratory nature of the project and the qualitative nature of the data, descriptive statistics and chi-square tests of independence were primarily used – advanced statistical modelling methods (e.g., logistic regression) were not employed, which is one of the study's limitations. The lack of triangulation with qualitative methods (e.g., in-depth interviews) also limits the possibility of a more in-depth analysis of social motivations.

4. National and global determinants of flagging policy in Poland (empirical context)

4.1. Historical foundations of Polish merchant shipping

Since the end of World War II, Polish maritime transport has undergone profound transformations driven by political, and economic shifts. Under the post-war socialist regime, the sector operated according to two guiding principles: economic self-sufficiency and state ownership. These principles shaped both the structure and functioning of shipping enterprises, while also imposing significant limitations. The centrally planned economy hindered market responsiveness, innovation, and efficiency—although, due to their international operations, Polish shipping companies maintained limited exposure to global practices (Roe, 2001).

Despite these constraints, the industry became a vital source of hard currency—particularly U.S. dollars—which were highly sought after in the socialist economy. The state subsidized shipping, enabling companies to offer competitive freight rates on the global market. Yet the sector suffered from chronic inefficiencies, including an oversized fleet that exceeded the country's actual economic needs, and a lack of competitive market mechanisms. Centralized decision-making, including state-directed specialization and investments through the state-owned Maritime Bank, restricted the development of adaptability and responsiveness by the shipping companies to global market changes.

By the late 1980s, Poland's fleet appeared impressive in terms of ships numbers. According to UNCTAD, it exceeded the fleets of countries such as France, Turkey, and Canada (UNCTAD, 1989). However, this apparent strength masked fundamental weaknesses in competitiveness and efficiency.

The global shipping crisis of the early 1980s exposed deep inefficiencies within the Polish maritime sector. From that period through the early 1990s, the national fleet began to shrink markedly. This decline was accelerated by the political and economic transformation that began in 1989. The transition from a centrally planned economy to a market-oriented system dismantled long-standing protections and forced Polish shipping companies to compete under unfamiliar and challenging conditions (Dobrowolski, 2018; Żurek, 2018). By 2004, fewer than 5% of the ships that had flown the Polish flag in 1990 (see Figure 1) remained registered under it.

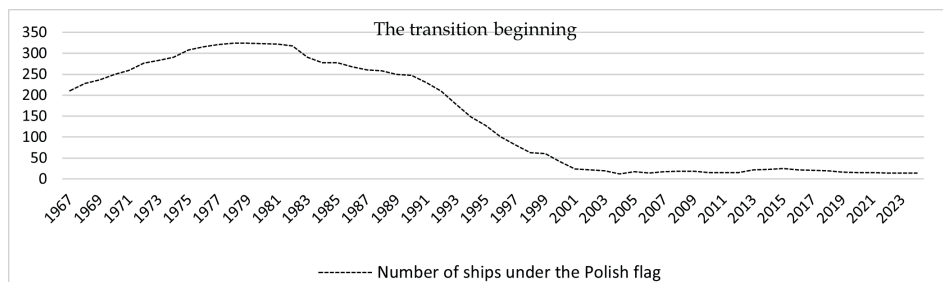


Figure 1. Number of ships under the Polish flag between 1967 – 2023

Source: GUS 2024, UNCTAD 1990

Several interrelated factors contributed to this collapse. At the microeconomic level, remnants of the socialist system persisted in decision-making processes. In the public shipping companies Workers' councils, general assemblies, and trade unions retained significant influence over investments and asset management, often leading to delays and poor strategic choices. These inefficiencies were compounded by bloated shore-based infrastructures.

At the mesoeconomic level, Polish shipping companies struggled to adapt. They lacked experience in forming cost-effective partnerships with service providers and in securing cargo through open-market competition. Simultaneously, traditional trade routes collapsed, while new global trade patterns no longer aligned with Poland's fleet capacities.

On the macroeconomic level, hyperinflation and the sharp devaluation of the Polish currency - PLN during the early transition period severely undermined the international competitiveness of domestic shipping firms (Dobrowolski, 2018; Sawiczewska, 1997; Żurek, 2018).

4.2. Seafarers and labour market dynamics

Before the economic transformation, Poland's system of seafarer remuneration was poorly aligned with international standards. Wages were paid in Polish currency and supplemented with modest foreign exchange allowances, which varied depending on rank a ship and sailing zone (e.g. Baltic, Europe, Atlantic zone). Though relatively low—ranging from USD 0.90 to 2.25 per day—these allowances provided meaningful incentives within a controlled economy marked by common shortages and dollarization (Układ Zbiorowy Dla Marynarzy w Żegludze Międzynarodowej z dnia 17.01.1975 r., 1975), maritime work conferred unique privileges. Seafarers were

legally allowed to travel abroad and had access to hard currency—both rare advantages for Polish citizens at the time. However, this changed dramatically after the opening of Poland's borders in 1989. With increased freedom of movement, many Polish seafarers—especially officers—began securing employment with foreign shipowners. Their maritime experience even with limited English proficiency made them highly attractive to international employers.

Following Poland's accession to the European Union in 2004, deeper economic integration and rising domestic wages further reduced the appeal of seafaring careers. Many experienced officers transitioned to land-based roles within the maritime sector, including positions in ship maintenance, logistics, finance, training, and crew recruitment. Former officers also established private crewing agencies, while major global operators and ship managers entered the Polish market.

The total effects of economic transformation, labour market shifts, and regulatory challenges have led to a steady decline in both the number of ships flying the Polish flag and public interest in maritime careers. As of 2023, only 14 vessels—mostly small and averaging 42 years in age—remain registered under the national flag (GUS, 2024). At the same time, Maritime Universities in Gdynia and Szczecin have experienced a long-term decline in student enrolment in navigation and marine engineering programs, beginning in the early 2000s (see Figure 2).

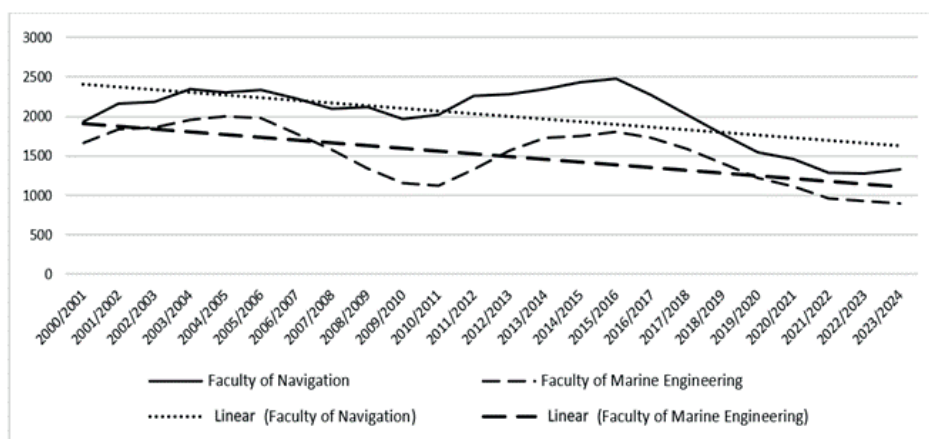


Figure 2. **Number of students enrolled in navigation and mechanical engineering, and construction at UMG and PMS in 2000/2001 – 2023/2024, with trend lines**

Source: GUS 2024

The issue of declining interest in maritime careers has been widely examined by researchers across the world. Some studies focus on the global dimension of the seafarer labour market, identifying trends such as the worldwide officer shortage and factors affecting recruitment and retention (Caesar, 2013; Dimitranov & Belev, 2024; Divine et al., 2021; Edirisinghe et al., 2016; Kan, 2024; Lušić et al., 2019).

Other studies concentrate on national contexts, examining how specific countries—particularly traditional maritime nations—are experiencing declining cadet intake and officer retention.

Particularly relevant are studies focused on officer attrition and recruitment challenges in traditional maritime nations such as the United Kingdom (Ruggunan, 2010), Denmark (Divine et al., 2021), Sweden (Hult & Snoberg, 2014), Finland (Kilpi et al., 2021), as well as Australia (Caesar, 2013), South Korea (Choi et al., 2024; Park et al., 2023) and China (Choi et al., 2024; Wu et al., 2021). These countries, once self-sufficient in supplying their own maritime labour, are now facing growing shortages and difficulties in maintaining a sustainable pool of qualified officers.

Paradoxically, while the national fleet has diminished, Polish shipping companies have significantly expanded their ship management capacity. As of 2024, they have been managed approximately 250 ships operating under foreign flags, with 84 vessels owned by Polish firms. In total, this fleet is comparable in size to the Polish-flagged fleet of the late 1970s—though nearly all of it is now registered abroad (PZPŻ, 2025).

4.3. Challenges of the national legal framework

The persistently low number of ships registered under the Polish flag has raised concerns about the effectiveness of policy measures aimed at reversing this trend. Notably, the introduction of the tonnage tax in 2006—intended to encourage ship registration in Poland—has failed to produce meaningful results (Dz.U. 2006 Nr 183 Poz. 1353, 2006). By 2023, annual revenue from the tonnage tax was negligible, amounting to less than EUR 1,000.

The primary deterrent to flag registration lies in labour costs, which are governed by the regulations of the flag state. According to Stopford's classification (2009), vessel operating costs fall into five categories: manning, stores and lubricants, repairs and maintenance, insurance, and general overhead. Among these, manning costs—particularly indirect labour costs—are most affected by national legislation (Stopford, 2009).

Under Polish law, employers must contribute to a broad range of mandatory social and health insurance funds, including pensions, disability, sickness, accident insurance, and various labour-related funds such as the Labour Fund, Wage Guarantee Fund, the Old-age Bridging Pension Fund, and the State Fund for Rehabilitation of Disabled People). These obligations increase the total employer cost by approximately 23%. Seafarers are

also required to contribute around 22% of their gross salary to social insurance, bringing the total wage burden to roughly 45%.

These high costs make Polish-flag registration economically unattractive. Shipowners would be required to absorb substantial additional expenses, while seafarers are unlikely to accept reduced net pay in exchange for flying the national flag.

Excluding seafarers from Poland's national social insurance system is not a viable policy option due to binding European Union regulations. A 2019 ruling by the Court of Justice of the European Union (CJEU) confirmed that social security obligations are determined by the seafarer's country of residence within the EU—regardless of the vessel's flag (*SF v Inspecteur van de Belastingdienst (Case C-631/17) – Judgment of the Court (Third Chamber) of 8 May 2019*, 2019). This means that Polish seafarers are entitled to Polish social security coverage even when working aboard ships registered in third countries.

In practice, this legal requirement has introduced considerable uncertainty. Many Polish seafarers employed on foreign-flagged ships either self-insure or remain without coverage. Employers adopt differing approaches: some include contractual clauses that shift the responsibility for insurance onto the seafarer, while others offer financial compensation intended to cover insurance costs.

To address this issue, several industry organizations have proposed reforms, in 2017. One suggestion involves introducing a reduced base for calculating social and health insurance contributions for seafarers. This would ease the cost burden on employers and could incentivize ship registration under the Polish flag. Despite the submission of legislative drafts and supporting documentation, these proposals were long delayed, and after the change of government (at the end of 2023), the new minister responsible for maritime affairs began consultations on this matter with shipowners and ship managers (currently, in mid-2025, a draft of appropriate legislative solutions is being processed in the Polish parliament).

The initial lack of political will stems largely from fears of public opposition. Policymakers argued that granting preferential treatment to seafarers could provoke discontent among other professional groups—especially within the framework of a unified social insurance system.

4.4. Global labour market pressures

Poland's maritime labour challenges must also be considered within the broader context of global industry trends. According to the Drewry Manning Report 2024/25, there is an escalating global shortage of qualified maritime officers. As of 2024, the shortfall was estimated at nearly 40,000 officers—a gap projected to widen as fleet expansion continues to outpace the entry of new personnel into the workforce (Drewry Maritime Research, 2024).

The vessel types driving this growth include LNG carriers (with a 9% increase between 2014 and 2024), bulk carriers (4.5%), and LPG carriers (4.1%). This mismatch between rising demand and shrinking interest in seafaring careers has placed increasing pressure on employers. To retain officers, many shipowners are now offering improved employment terms, such as shorter voyage durations, extended paid leave, retirement benefits, and professional development programs (Drewry Maritime Research, 2024).

In this highly competitive environment, Polish shipping companies are at a disadvantage. Regulatory costs make it difficult for them to match these international employment conditions. However, a well-designed national policy, with instruments such as subsidizing seafarers' social insurance costs—could help level the playing field. With state support, ships under the Polish flag could offer more attractive employment packages.

Such a policy would also benefit Poland's maritime education sector by creating stable, legally protected career paths for domestic graduates. Sustaining a skilled maritime workforce would strengthen national competence, reduce dependence on volatile global labour markets, and lower recruitment risks and costs.

4.5. Maritime governance in the EU: the role of the fleet in managing risk and ensuring supply continuity

Maritime shipping has historically played a crucial role in the development of Europe, including the European Union (most of the countries considered Traditionally Maritime Nations are European countries: Greece, Norway, the United Kingdom, the Netherlands, Denmark, and Germany). Until recently, it was a key pillar of the competitiveness of the EU economy. 76% of EU trade with other countries is handled by sea, and within the EU, this mode of transport accounts for approximately 30% of trade volume (ECSA, 2024). The EU sector's position in the international arena is also significant, as EU maritime trade contributes over 14% of global GDP (EMSA, 2025). The importance of maritime transport in the European Union is well documented by the sector's impact on the European economy.

According to Oxford Economics reports, maritime shipping is a significant sector in the EU economy, also due to the impact it generates. The sector directly employs nearly 700,000 people (of which approximately one-fifth is employed at sea), the indirect effects generated by shipping create 780,000 jobs, and the induced effects provide a further 540,000, totalling over 2 million jobs (Oxford Economics, 2024). From a maritime governance perspective, maritime shipping is a fundamental instrument for managing systemic risk and ensuring the continuity of supply in the European Union. At the same time, it remains a pillar of competitiveness and security. In the report "The Future of European Competitiveness," Draghi identified three axes of challenges facing

the European Union: innovation, energy costs and decarbonization, and geopolitical instability (Draghi, 2024b).

Shipping, and the EU's maritime economy more broadly, were identified as a crucial link in the smooth operation of the economy—from maintaining trade capacity, through technological modernization (automation, digitalization, green drives), to resilience to supply-demand shocks (Draghi, 2024a). Meanwhile, Europe is losing relative position: rankings of shipping hubs (Menon Economics & DNV, 2024) indicate a growing advantage of Asian and Atlantic hubs – primarily China, Australia, and Singapore. Because, although state aid is understood as state intervention and is prohibited in EU practice, it may be deemed compatible with the internal market provided it meets the criteria set out in primary and secondary law and does not unduly distort competition (European Union, 2012). Such interventions have been deemed justified in the shipping sector. Several attempts have been made to introduce systemic solutions that would maintain EU competitiveness, safety, continuity of supply, and maintain maritime expertise and employment in the industry (ECSA, 2024; EMSA, 2025). The public aid instruments permitted in the European Union include:

- fiscal tools (tonnage tax; income tax relief for seafarers; accelerated depreciation; investment deductions);
- solutions reducing labour costs (reduction or assumption by the state of seafarers' social security contributions (with conditions regarding the participation of EU personnel);
- support for education and training (subsidies for cadet places and training programs; recognition of qualifications, investments in environmental protection (support for expenditures exceeding legal/class minimums (safety, environmental protection, modernization);
- in justified cases, restructuring aid;
- aid for coastal regions (regional: instruments for peripheral coastal regions (port and logistics infrastructure) (Commission of the European Communities, 1989; European Commission, 1997, 2004, 2009, 2017).

In the report “The future of European competitiveness,” Draghi (2024a) pointed out that Member States' interventions to date have been insufficiently effective for three reasons:

1. A lack of coordination in the implementation of permitted instruments, leading to divergent standards and negative externalities for the single market.
2. A lack of scale – large projects are financed at the European level, while day-to-day support instruments remain dispersed at the national level, thus preventing economies of scale.
3. A slow and siloed policymaking process, resulting in low responsiveness to changes (Draghi, 2024a).

From a public governance perspective, the recommendation boils down to greater coordination between states and better linking sectoral tools with community objectives, so as to minimize distortions of competition while strengthening the resilience of supply chains (Draghi, 2024a; European Union, 2012).

On the other hand, the scientific community strongly criticizes the EU's approach to shipping, which is based on rigidly established solutions based on public aid instruments. Roe (2013) points to the inadequacy of the approach to shipping, which is based on "rigid adherence to formal structures," which, in relation to the dynamically changing maritime shipping sector and its organization, is ineffective. He believes that the global nature of maritime shipping determines the approach to this mode of transport, as it requires long-term planning and, at the same time, rapid plan adjustments to changing operating conditions (Roe, 2013). EU policy towards maritime transport should be flexible, adapting to changing institutional conditions (international regulations), factors caused by geopolitical phenomena, economic pressures, and growing challenges related to environmental protection. Another aspect criticized by Roe (2013) concerns the entities that should participate in policymaking, mentioning: "(...) private sector entities, environmental organizations, regional authorities," thus enabling the creation of more effective solutions at the regional, EU, and international levels. Compatibility and completeness achieved in this way would eliminate the current fragmentation and inefficiency of the adopted solutions.

In Poland, public aid in this industry is limited solely to the financing of higher education institutions and post-secondary schools providing education for the maritime shipping industry and the introduction of tonnage tax. Neither instrument has had an impact on the attractiveness of the Polish shipping register.

5. Public opinion survey

5.1. Survey design and statistical approach

The public opinion survey was conducted in May 2023 using the CAWI (Computer Assisted Web Interview) method on a nationwide representative sample ($n = 1,001$). The sample was selected by an external research agency, ensuring representativeness of the adult population of Poland in terms of age, gender, and place of residence. A mixed sampling approach (random and non-random) with internal randomization was used, which limited the influence of uncontrolled variables.

Respondents received a brief introduction containing a current description of the situation – the negligible number of ships flying the Polish flag – and a set of five closed-ended questions regarding:

- the perceived strategic importance of the fleet,

- willingness to support its reconstruction,
- acceptance of preferential instruments,
- opinions about the seafaring profession,
- expectations regarding government policy.

The study was conducted in accordance with the principles of research ethics: all participants provided informed consent and were informed of the anonymity and processing of personal data. To verify the existence of a relationship between responses and demographic characteristics (age, education), a chi-square test of independence was used at a significance level of $\alpha = 0.10$. Additionally, Tschuprow's T and Yule's coefficients of convergence were calculated to illustrate the strength of the relationship between qualitative variables. Tschuprow's T values between 0.2 and 0.3 indicate a weak relationship, and values above 0.35 indicate a moderate relationship.

Table 1 presents the obtained chi-square statistics and coefficients of relationship strength. The chi-square statistics for most of the analysed variables exceed the critical values for $\alpha = 0.10$, which allows us to reject the null hypothesis and confirm the existence of statistically significant relationships between responses and demographic characteristics. Due to the nature of the data, the Yule's coefficient is only of auxiliary value and does not constitute a basis for interpretation.

Table 1. Relationships between responses and demographic variables (age and education)

Question number	Feature	χ^2	Tschuprow's T	Yule
1	Age	73,28	0,4046	0,2706
	Education	30,42	0,2607	0,1743
2	Age	53,56	0,3459	0,2313
	Education	31,02	0,2632	0,1760
3	Age	48,95	0,3307	0,2211
	Education	23,55	0,2293	0,1534
4	Age	51,56	0,3394	0,2270
	Education	28,76	0,2535	0,1695
5	Age	23,89	0,2310	0,1545
	Education	24,98	0,2362	0,1580

Source: Authors' own elaboration based on primary data

The results of the analysis indicate that age was significantly associated with responses to all questions except question 5, with the strongest correlation observed for question 1 (Tschuprow's T-score = 0.4 – a moderate relationship). Education demonstrated a statistically significant, though weaker, relationship with responses to most questions – the lowest value was observed for question 3 (Tschuprow's T-score = 0.23). Coefficient values generally fall within the 0.20–0.35 range, allowing them to be classified as weak to moderate relationships, in accordance with the adopted interpretative convention. This confirms that demographic characteristics influence public opinion but are not the dominant factor. At the same time, the results demonstrate the survey's internal consistency and its ability to capture differences in public opinion based on age and education.

5.2. Results

The respondent group included 512 women and 489 men. The dominant age group was 35–44 years, with a median age of 41.3 years. One-quarter of respondents were younger than 30.7, and 75% were older than 53.7. The interquartile range was 23, which yielded a positional coefficient of variation of 56%, indicating moderate age variability.

The first question addressed the perceived importance of Poland maintaining a merchant fleet flying the national flag. A total of 74% of respondents considered this important. Support was consistent across gender, age, and education levels, indicating that the national fleet retains symbolic and identity-based value.

Respondents aged 55 and older more frequently selected “definitely important” (45%), likely reflecting historical memory of the fleet's role during the communist era. Among younger participants, “rather important” was the dominant response, suggesting a need for a renewed national narrative around maritime identity.

Support exceeded 70% in all educational groups. Among those with higher education, 76% agreed, suggesting greater awareness of the fleet's economic and logistical relevance (Figure 3).

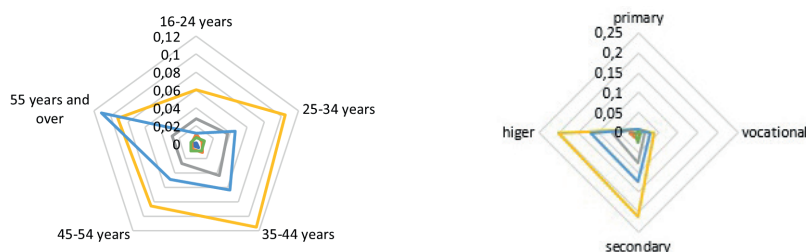


Figure 3. Assessment of the importance attributed to maintaining a Polish-flagged merchant fleet, by age and education

Source: Authors' own elaboration based on primary data

The next question explored attitudes toward labour cost burdens and social security contributions, which are considered barriers to registering ships under the Polish flag.

A strong majority—81%—supported government efforts to increase the number of Polish-flagged vessels through registration facilitation and economic incentives. This indicates a broad level of social acceptance for state intervention in the maritime sector, regardless of technical knowledge.

Support increased with age: 50% of respondents aged 55+ selected “definitely yes.” Among those with secondary or higher education, support exceeded 80%. Gender differences were minimal. These results suggest a strong public mandate for introducing support instruments such as tax relief, subsidies, or simplified registration procedures (Figure 4).

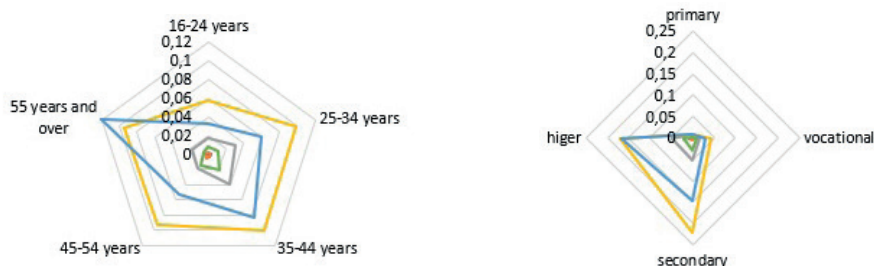


Figure 4. **Support for policy measures facilitating ship registration under the Polish flag, by age and education**

Source: Authors' own elaboration based on primary data

The statement that “everything should be done to return Poland to the seas and oceans” received the most favourable responses. Seventy-nine percent of respondents supported reforms to the social insurance system for seafarers to improve their international competitiveness. Among them, 37% selected “definitely yes.” This indicates a strong societal understanding of the strategic importance of this profession (Figure 5). As in other questions, support was higher among older respondents and those with higher education. These findings suggest that reform initiatives are unlikely to face public resistance, provided they are well communicated and framed in terms of sectoral competitiveness.

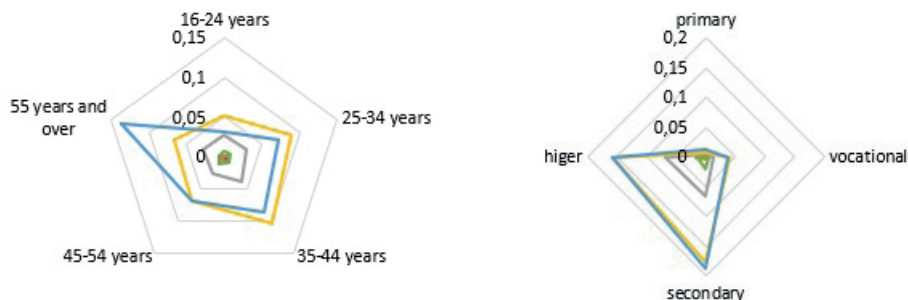


Figure 5. **Public attitudes toward reforming seafarer social insurance to enhance competitiveness, by age and education**

Source: Authors' own elaboration based on primary data

Respondents were asked whether Poland should rebuild its presence on the seas and oceans. A total of 74% agreed, including 39% who “strongly agreed.” This suggests a strong symbolic and identity-driven demand for a visible maritime presence. Support was particularly strong among respondents aged 55 and older (56% “strongly agree”), likely due to recollections of Poland’s former maritime strength. Educational background had no significant impact on responses, indicating that the sentiment is widely shared (Figure 6).



Figure 6. **Agreement with the statement on rebuilding Poland's maritime presence, by age and education**

Source: Authors' own elaboration based on primary data

The final question assessed whether respondents would support special legal provisions for a specific occupational group. They were asked to respond to the statement:

I am opposed to introducing special regulations for selected social groups, even if such measures bring measurable benefits to the state.

This question aimed to evaluate whether social solidarity or personal interest would outweigh support for sector-specific policy solutions. A total of 33% disagreed with the statement—indicating support for special treatment of the maritime sector to ensure a Polish-flagged fleet. Another 33% were undecided, while 25% agreed with the statement (8% strongly agreed).

A demographic breakdown revealed that the highest levels of resistance came from respondents aged 25–44 and those with secondary or higher education (Figure 7).



Figure 7. Responses to the rejection of special legal provisions for occupational groups, by age and education

Source: Authors' own elaboration based on primary data

Despite strong overall support for reviving the national fleet, the neutral responses suggest an educational gap. There is a limited public understanding of the economic role of shipping and how the industry functions.

The obtained results confirm the existence of symbolic and strategic support for a national fleet, even in the absence of direct economic benefits. High support across demographic groups reflects the presence of social legitimacy for state intervention in the maritime sector (confirming hypotheses H1 and H3). In turn, acceptance of regulatory changes in favour of seafarers suggests that symbolic value may translate into acceptance of preferential policies (partially confirming H2). Thus, the results of the empirical study support the theoretical assumption that maritime policy can be socially legitimized not only through economic effectiveness but also through identity narratives.

5.3. Implications of respondent diversity in age and education

The survey results indicate that public opinion on the rebuilding of the Polish-flagged merchant fleet is not uniform and depends on the age and education of respondents. This has implications for the design and, to a greater extent, the communication of maritime policy. The relationship between age and responses indicates that older respondents (especially those over 55) were significantly more supportive of rebuilding the national fleet and preferential treatment for seafarers. This may reflect ingrained sentiment and a historical memory of Poland's presence at sea, especially during a time when Poland's presence on the seas was more pronounced.

However, support from older generations, based on sentiment, may not provide a sustainable basis for long-term policy unless supplemented with rational arguments addressed to younger generations. In turn, the relationship between education level and responses indicates that respondents with higher education demonstrated stronger support for institutional and economic reforms in the maritime sector, even if they had no direct professional ties to the industry. Their attitudes may stem from a more general understanding of public policy mechanisms and the sector's competitiveness. This creates the potential to build support for reforms through narratives based on expert knowledge and facts.

The diversity of opinions by demographic characteristics confirms that social legitimization of maritime policy requires diverse communication strategies: narratives based on identity and history may appeal to older audiences, while educational and rational communication based on cost-benefit analysis and systemic argumentation may be more appealing to younger, more highly educated individuals.

The relatively high percentage of neutral responses (33%) is particularly interesting and warrants special attention, especially when asked about preferences for special regulations for selected professional groups. This neutrality may reflect: low awareness of the specific nature of the shipping sector, uncertainty about the broader implications of potential privileges, and the need for additional information and education. This neutrality should not be interpreted as opposition. Rather, it represents an opportunity: a potential base of public support that can be mobilized through targeted communication strategies. A well-designed political narrative, clearly articulating the national interest and social benefits of a strong Polish merchant fleet, could transform neutral attitudes into active support. Public indecision, therefore, underscores the need for clear, accessible political communication based on both symbolic and economic arguments.

6. Discussion and hypotheses assessment

The results of a representative public opinion survey, combined with historical and institutional analysis and statistics of the global maritime labour market, enabled

a comprehensive assessment of the conditions and prospects for maritime policy in Poland and the verification of the proposed hypotheses.

Hypothesis H1 assumed that an effective policy of maintaining the national flag requires a coherent and complementary set of maritime policy instruments. In light of historical analyses (Section 4), Poland implemented only a “point-based” solution – the tonnage tax introduced in 2006, which had no impact on either shipowners (it did not stop the process of deregistering ships from the Polish ship register) or public finances (the impact of this tax was insignificant for the Polish budget). High labour costs, particularly social security contributions, remain a key barrier, increasing the costs of employing seafarers on ships by approximately 45%. From a governance perspective, the lack of a systemic approach weakens the state’s ability to influence shipowners’ decisions. At the same time, the results of the public opinion survey indicate 81% support for measures facilitating the registration of ships under the Polish flag, demonstrating strong social legitimacy for this type of instrument. Hypothesis H1 is partially confirmed: there is public acceptance, but a comprehensive set of tools for maritime policy is lacking.

Hypothesis H2 concerned the importance of coordination between the national, EU, and international levels. The literature emphasizes that sectoral policies in the maritime economy require multi-level governance and flexibility (Hooghe & Marks, 2003; Roe, 2009). Comparative analysis shows that many EU countries use the European Commission-approved shipping support tools, while Poland implements them to a limited extent – without linking them to labour market policy, education, or energy transition. The Draghi Report (2024b) highlights the problem of fragmentation and lack of scale, which is also reflected in the case study of Poland (Section 4). Hypothesis H2 was confirmed.

Hypothesis H3 assumed that transparency, trust, and stakeholder participation foster the legitimacy of maritime policy. The study did not include direct indicators of participation, but the high level of acceptance of sectoral regulations (only 33% of respondents expressed opposition to preferential treatment for seafarers) suggests a climate of public trust. As demonstrated by previous studies (Roe, 2013; Brooks, 2019), the symbolic importance of the maritime sector can foster acceptance of policies, even if their direct effects are not widely known to the public. This indicates the need for better institutional communication and community involvement in decision-making processes. Hypothesis H3 was therefore indirectly confirmed; its full verification requires additional qualitative research.

Hypothesis H4 concerned the relationship between fleet maintenance and the stability of the human resources and education base. Historical data show that Poland had an extensive maritime education system and a large pool of experienced personnel, but liberalization after 1989 led to their dispersion and professional emigration (Section 4). Maritime universities are currently subsidized, but there is no system in

place to support graduates entering the sector. At the same time, data from the Drewry Manning Review (2024) confirms a global officer shortage and increasing salary competition, which poses a challenge to national systems. Survey respondents were more likely to express support for fleet reconstruction if they had a higher education—which may indicate a greater awareness of the systemic links between education and the fleet. Hypothesis H4 is therefore partially confirmed in both structural and social dimensions.

Hypothesis H5 refers to the quality of maritime sector governance as a prerequisite for effective policy. Governance theory emphasizes the ability of institutions to respond to change, coordinate activities, and collaborate with stakeholders. In the analysed case, Poland's maritime policy is poorly coordinated—both internally (lack of links with labour policy) and externally (limited participation in international projects). Despite this, high public support for intervention indicates untapped political potential. Hypothesis H5 was therefore confirmed in theoretical and systemic dimensions, although it requires further research into institutional practices.

The results of the public opinion survey—combined with global labour market trends and national fleet statistics—offer a comprehensive picture of both the challenges facing the Polish merchant fleet and public perceptions of its significance.

The survey confirmed broad support for maintaining a merchant fleet under the Polish flag. This sentiment is shared across demographic groups and is especially strong among older respondents. These findings support the hypothesis that, despite the economic inefficiencies of operating under the national flag, the fleet retains symbolic and strategic value in the public imagination.

Importantly, respondents expressed a willingness to support economic incentives and institutional reforms, including adjustments to the social security system for seafarers. This suggests a general openness to targeted public support mechanisms—particularly when framed in terms of national interest. Notably, only 35% of respondents expressed opposition to preferential treatment for seafarers, indicating relatively low resistance to sector-specific regulation, which is often a barrier in policymaking.

However, this symbolic endorsement stands in contrast to persistent structural and regulatory disadvantages.

As the data show, decades of state interventions—including the introduction of the tonnage tax in Poland in 2006—have failed to reverse the decline of the national fleet. The core deterrent remains: high employer and employee contributions to Poland's social security system increase total wage costs by approximately 45%, making the Polish flag economically uncompetitive.

These domestic constraints are further compounded by global pressures. The Drewry Manning Review 2024/2025 highlights a growing shortage of qualified maritime officers, escalating wages and intensifying global competition for talent. With its ageing fleet

and relatively high labour costs, Poland is at a disadvantage in retaining or attracting shipowners to its national registry.

This tension underscores a fundamental contradiction in Polish maritime policy: public support and symbolic sovereignty on one hand, and the market realities of a liberalized, globalized shipping industry on the other.

Polish policymakers are thus confronted with a strategic dilemma. If the national fleet is deemed socially valuable, the state must choose between:

- pursuing significant regulatory reform, such as modifying seafarers social insurance obligations;
- or accepting a decoupling of economic activity from national registration, whereby Polish maritime services are managed domestically while vessels continue to fly foreign flags.

7. Limitations and further research

This study has several limitations. First, the public opinion data are cross-sectional, capturing attitudes at a single point in time. Longitudinal studies would be needed to track changes in perception over time. Second, although the sample was demographically representative, it did not specifically capture the views of key stakeholder groups, such as shipowners, trade unions, maritime professionals, or policymakers. Future research should incorporate qualitative methods or targeted surveys to reflect these perspectives, but the article has the following added value:

1. It contains public opinion poll results confirming support for social security reform for a selected group. It has an educational and communication contribution – the article proves that shipping is important not only from a business perspective, but also from a public interest perspective: food security, energy security, and supply chain resilience.
2. It includes data presenting the situation of the selected industry in the EU and global context.
3. It identifies the “bottleneck” (indirect labour costs) as the decisive factor in rejecting the Polish registry – the desire for a cost advantage over competitors makes it necessary to employ an appropriate registry selection strategy.
4. It describes shipping as a key element of the supply chain to Europe. Regulatory decisions made at the EU level of governance should reduce operational risk and ensure continuity of supply – the facts cited indicate that this is not the case.
5. It addresses the issue of managing human capital with appropriate qualifications – the shortage of officers and the reasons for their withdrawal from the profession are raised (using the example of Poland).

6. To some extent, the article touches on issues related to change management – research results indicate that adopting the right perspective and narrative increases public acceptance of the idea of differentiating burdens.

8. Conclusions

Although the Polish-flagged merchant fleet has nearly disappeared, this study demonstrates that the idea of maintaining a national fleet retains considerable symbolic and strategic value for Polish society.

A strong majority of respondents support policy interventions aimed at rebuilding the fleet, including economic incentives, institutional reforms, and regulatory adjustments. This approval was consistent across demographic groups and especially high among older respondents – highlighting both historical memory and current strategic concerns.

However, public sentiment alone is insufficient to reverse the decline. Structural obstacles—particularly those related to social insurance and labour regulations—continue to make the Polish flag economically unattractive to shipowners. These domestic constraints are further compounded by global labour market pressures, including officer shortages and rising wage demands. The Drewry Manning Review 2024/2025 illustrates how wage inflation and international demand for maritime labour challenge national competitiveness.

As such, Poland faces a strategic policy choice. If it seeks to re-establish a fleet under its own flag, significant legal and fiscal reforms will be required – especially in the area of labour taxation and seafarers insurance. Equally important is the need for clear and accessible public communication: making the case for targeted support policies to citizens unfamiliar with the shipping sector.

Alternatively, the state may prioritize the broader development of the maritime economy—crewing, ship management, and offshore services—without necessarily linking those activities to national ship registration.

Using a mixed-methods approach, this article contributes to three areas of scholarly literature. First, in the field of maritime governance and policy innovation, it demonstrates that the legitimacy of maritime policy in the eyes of the public can stem not only from economic logic but also from symbolic and identity-based considerations. Second, it contributes to research on public sector legitimacy and symbolic policymaking by providing empirical evidence that the national fleet is perceived by citizens as a public and strategic good. Third, in the context of maritime labour and national competitiveness, the article highlights the structural mismatch between national regulatory frameworks—especially social security costs—and the realities of global labour markets.

Ultimately, while restoring the fleet under the Polish flag is a socially desirable goal, it is only achievable through carefully calibrated policy instruments that balance economic realism with public expectations.

Authors' contribution

M.S.: research methods applied, data collection, draft manuscript preparation. **K. S.:** article conception, theoretical content of the article, analysis and interpretation of results. **A. W.:** research methods applied, conducting the research, data collection, analysis and interpretation of results.

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Declaration of Generative AI and AI-assisted technologies in the writing process

While preparing this work, the authors did not use any tool/service.

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Appendix. The Research questionnaire

Participant introduction.

Currently, there are almost no cargo ships flying the Polish flag in Poland. The government and industry are considering solutions that could change this. Below are a few short questions about your opinion. Participation is voluntary and anonymous.

Questions and response scales.

Q1. How familiar are you with topic of merchant ships flying the Polish flag?

- ☐ I know exactly what the situation is with.
- ☐ I have only heard about this situation in the media or from friends/family.
- ☐ This topic was completely unknown to me until now.

Q2. How important is it to you that Poland has the merchant fleet flying the Polish flag?

- 1. definitely not important
- 2. rather not important
- 3. neither important nor important
- 4. rather important
- 5. definitely important
- 6. I don't know, hard to say

Q3. Do you want Poland to have the merchant fleet flying the Polish flag?

- 1. definitely not
- 2. probably not
- 3. neither yes nor no
- 4. probably yes
- 5. definitely yes
- 6. don't know, hard to say

Q4. In your opinion, should ship registration simplifications and economic incentives be introduced to encourage Polish and foreign shipowners to register ships under the Polish flag?

- 1. definitely not
- 2. probably not
- 3. neither yes nor no

4. probably yes
5. definitely yes
6. don't know, hard to say

Q5. In your opinion, should changes be introduced regarding social security for Polish seafarers to ensure their competitiveness in the EU and global shipping labor markets?

1. definitely not
2. probably not
3. neither yes nor no
4. probably yes
5. definitely yes
6. don't know, hard to say

Q6. To what extent you agree or disagree with the statement?

Statement:	1	2	3	4	5	6
	I strong-ly dis-agree	I tend to dis-agree	I neither agree nor dis-agree	I tend to agree	I strongly agree	I don't know, hard to say
A. The ability to have your own fleet is prestigious for the country.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. I would feel proudly Polish if our country had ships flying the Polish flag.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Everything should be done to ensure that Poland returns to the seas and oceans.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. The possibility of using tax relief/facilitations in any activity should be blocked.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. I am against introducing special regulations for selected social groups, even if it brings tangible benefits to the state.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. No legal changes or economic incentives will make the Polish flag competitive in the EU and global shipping markets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. The shipowner's economic calculation should determine the colors of their ships' flags.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Without the Polish flag, the functioning of maritime education in Poland is at risk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Without ships flying the Polish flag, the country's energy security is at risk.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>