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War at Sea—Portugal, Navigation and Maritime Commerce during World War One

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Abstract

This article presents new research on the Portuguese Maritime Front during World War One, especially regarding the German submarine war off the Portuguese coast. One subject, in particular, has remained obscure for many contemporary Portuguese historians: the direct and indirect impacts of the German submarine war on the Portuguese economy. In this article, we correlate the material losses provoked by German submarines in the Portuguese Atlantic with fluctuations in maritime commerce during the Great War. This approach sheds new light on how the war at sea affected the economies of peripheral countries like Portugal.

Keywords: Portugal, World War One, German Submarine War, Navigation.

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Introduction

Contemporary Portuguese historiography has produced hundreds of pages of scholarship about the Portuguese “maritime front” during “the Great War”. Modern historians, however, have not been able to properly link the war at sea with the debacle of the Portuguese economy during the difficult years of this global conflict. Portuguese maritime operations and the German submarine sorties on the Portuguese coast are quite well studied, but there are many silences, gaps and inconsistencies. One matter in particular has received relatively little attention: we remain very ignorant about the impact of German submarine warfare on the Portuguese economy during the Great War and its effect on navigation and maritime commerce. The objective of this article is to provide new evidence that connects the war at sea with Portugal’s wartime economy.

Despite the considerable output in the centennial years 2014-2018, the analytical focus of contemporary historiography has essentially been on military aspects of the war. The Portuguese historiography demonstrates a good understanding of German submarine activity in the Atlantic, but has left unexplored dimensions. The trail of destruction left by submarines off the Portuguese coast was never linked to its economic and social effects in Portugal. Even the Portuguese economic historiography did not consider the contribution of the German submarine war towards the degeneration of the national economy through the war years. The disarticulation of oceanic routes, the rise of maritime freight costs, the poor condition of the Portuguese merchant fleet, and the Kafkaesque mismanagement of the Austro-German ships seized by the Portuguese government in 1916, seemed to explain much of the Portuguese economic crisis within this chronology. We believe this alone does not give us the big picture, and that a much more accurate portrait can be provided by tracking all material losses provoked by German submarines.

In short, a proper study of this subject has yet to be done—we are insufficiently aware of the social and economic impacts of submarine warfare in Portugal, including its impacts on navigation and commerce. Given the gaps and silences of the current historiography, this article addresses the following question: how did the German submarine war deepen the Portuguese economic crisis during the Great War? We aim to bring a more informed approach to this topic based on recent developments in this field, although we are aware that we cannot yet provide definitive conclusions in some respects. In particular, the indirect impacts of the German submarine war need a much wider crossover of primary sources that has not yet been achieved.

To enhance our understanding of the impacts of the German submarine war on navigation and commerce in Portugal, we focus on several primary sources. Firstly, national newspapers such *A Capital*, *O Século*, *O Diário de Notícias* and *O Comércio do Porto* offer vital information about German submarine attacks, sunken ships, cargoes, port movements, sea routes and much more information regarding the maritime world from a Portuguese perspective.¹ Secondly, the data provided by historical newspapers are correlated to documentary sources present in the Portuguese Navy Historical Archives and Lloyd’s Register of Shipping records to provide a more accurate classification of shipping losses.² In addition to these sources, research collated from government and parliamentary documentation, and the Commercial Statistics (*Estatística Comercial*) volumes produced by the Portuguese Finance Ministry³ allow us to integrate the various primary sources to advance our

¹ These were probably the most important Portuguese newspapers at the time.

² Lloyd's Register of Shipping was the globe's first ship classification society, being an entity attached to the celebrated British insurance institution Lloyd's of London. The society began operating in 1760, registering all merchant ships under its marine insurance.

³ These volumes contain much information on navigation and commerce in Portugal during this period.

understanding. Finally, the electronic resources uboat.net⁴ and wrecksite.eu⁵ allowed us to track the losses caused by German U-boats.

This article comprises four dimensions. Firstly, an overview of the Portuguese maritime economy is provided to frame the topic. Secondly, we discuss how Anglo-Portuguese negotiations around the seizure of 72 Austrian-German ships in 1916 impacted the country's navigation and commerce, as well as its diplomatic position within the Entente alliance. Thirdly, we sum up the main economic impacts of the German submarine war in the Portuguese Atlantic Sea, exposing the limits of the geographical area in question and analyzing the naval losses registered in these waters. Lastly, we identify the major economic and social impacts in Portugal of the German submarine war. A conclusion is also provided in order to reflect how the war at sea shaped this peninsular nation during this conflict.

Portuguese Port Facilities and its Merchant Navy During the Great War

In the late nineteenth century, the famous Portuguese historian, intellectual and politician, Oliveira Martins described the Portuguese economy in the following terms: “this country is a vast export farm” (Francisco Louçã 2020, 141). This reality did not change much throughout the years of the Great War. From 1910 Portugal was one of the few republican regimes in Europe and its 1910 population totalled 5,960,056 (A.H. de Oliveira Marques 2010, 15). According to Álvaro Ferreira da Silva and Luciano Amaral, Portugal was the poorest country in western Europe and its economy had more in common with the Balkan countries in 1914 (Silva and Amaral 2011, 53). The country was massively rural and its industry was only visible in some areas around Lisbon, Porto, the Setúbal peninsula, the Minho region and some other isolated locations. The state of the country's negligible industrial sector was clearer after the National Industrial Survey (Inquérito Industrial) in 1917. According to this survey, Portugal had a total of only 5,500 factories with 130,000 workers, half of them linked to the textile, beverage and foodstuff sectors (Louçã 2020, 124). With a weak industrial sector, deprived of iron and coal which the country always needed to import, Portugal relied on its agricultural products to assure its revenue from external commerce. An underdeveloped economy naturally did not promote a strong maritime industry, entangled with the global economic challenges of the time.

Most Portuguese external commerce was made by sea⁶. Port infrastructure was insufficient, even though Portugal ranked in seventh place among the countries with the most port traffic in 1914 (Ana Paula Pires 2011, 74). Immediately before the war, annual shipping traffic averaged 8,213 arrivals in Portuguese ports per year, with a total tonnage of 13 million tons of cargo (Ana Prata 2011, 99). Lisbon, Porto and Leixões were Portugal's most important ports, although these were barely equipped with proper port facilities and communications compared to other European ports; this prevented Portugal from being a great intercontinental platform with connections to the American continent, as many ministers dreamed (Marques 2010, 31). These three ports represented 62 percent of all port traffic in ship movements; and if we consider only the tonnage the percentage is even more significant at 88 percent (Prata 2011, 99). Lisbon, the main maritime port, played a key role in the nation's income and commercial exchange: by this time, around 90 percent of all goods that came from abroad were unloaded there (Fernando Rosas 2018, 59). Several republican governments tried to improve these port facilities, but only Leixões had seen some improvements.

⁴ This website, created by Michael Lowrey, Yves Dufeil and Johan Ryheul. provides information about all shipwrecks provoked by German submarines during the war, based on German war diaries from the *Marinekorps Flandern* Archive at Freiburg, in Germany.

⁵ This website is the world's largest online wreck database developed by a large team of researchers worldwide.

⁶ *O Século*, May 31, 1917, 1.

Before the Great War, Portugal had one of the smallest merchant fleets in the world. The Portuguese merchant fleet tonnage could barely satisfy the needs of its national import-export industries: according to *Lloyd's Register of Shipping*, Portugal had only 210 ships⁷, with a combined total of 120,931 gross tons.⁸ This was comparable to the Ottoman Empire's and Chile's commercial fleets in numbers and in tonnage, but the total gross tonnage represented less than one percent of that of its main commercial partner, Britain. In addition to the meagre numbers, the Portuguese merchant fleet was obsolete and poorly prepared for oceanic/long-distance routes. These facts were somewhat paradoxical, given that Portugal had a huge colonial empire at the time.

Due to the size and condition of its merchant fleet, Portugal was very reliant on the regular flows of foreign-flagged merchant vessels and their commercial routes to satisfy its domestic needs, given that most of its external commerce was conducted by shipping. In 1914, for example, 63 percent of the ships that entered Portuguese ports were under a foreign flag.⁹ Furthermore, Portuguese commerce was very centralized: The Great War would demonstrate unequivocally how dependent Portugal was on foreign commercial flows and the dominance of Lisbon. Despite all of these handicaps, the Portuguese merchant fleet actually grew in numbers during the war as we can see from Table 1, mainly because Portugal seized 72 Austro-German ships that anchored in its ports from August, 1914.¹⁰ In 1916, the Portuguese government tried to create its own merchant navy by creating *Transportes Marítimos do Estado*¹¹ with these seized steamers, but scarce human resources, state mismanagement and private competition led to its extinction in 1926 (Marques 2010, 32).

Table 1
Portuguese merchant fleet, 1914-1920

	1914- 1915	1915- 1916	1916- 1917	1919- 1920
Number of Steam and Sailing Vessels	210	206	267	227
Total tonnage (t.)	120,931	122,726	334,491	261,212

Source: Lloyd's Register of Shipping—*World Fleet Statistics*. Biennials 1914-1920.

Note: Lloyd's did not produce data covering 1918.

Four main navigation companies dominated external commerce, intercontinental transportation and mobility between Portugal, its Macaronesian archipelagos (Madeira, Azores and Cape Verde) and its colonial empire (Portuguese Guinea, São Tomé and Príncipe, Angola, Mozambique, Portuguese India, East Timor and Macau) during the Republican period (1910-1926): *Companhia Nacional de Navegação*¹² had regular departures to Portuguese islands and colonies; *Empresa Insulana de Navegação*¹³ connected mainland Portugal to the Azores and Madeira; *Companhia Colonial de Navegação*¹⁴ created routes to Portuguese

⁷ Total number of steam and sailing vessels of 100 tons and upwards.

⁸ Lloyd's Register of Shipping. 1914-1915. *Statistical Tables—Table nº1 and 2*, 961.

⁹ Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1916*, 319.

¹⁰ During 1916, Portugal seized 72 Austro-German ships at the request of Great Britain (see below). These ships totalled 242,442 gross tons, which was more than double the pre-war tonnage of the Portuguese merchant fleet.

¹¹ National Maritime Transports.

¹² National Navigation Company.

¹³ Island Navigation Company.

¹⁴ Colonial Navigation Company. Before 1918, the name of this company was *Empresa Nacional de Navegação*.

Guinea, Sao Tomé, Angola and northern Europe, from 1922; and after the war *Companhia dos Carregadores Açorianos*¹⁵, which operated with some seized German steamers during the war, connected the Azores to Britain. Before and during the war the first two of these were the only private navigation companies that operated regularly, as well as the state's *Transportes Marítimos do Estado* from 1916. In the 1920s the Portuguese government would create legislation to emphasize the Portuguese merchant navy, by giving some financial support, construction prizes and tax reductions to improve national and international mobility in an attempt to reduce foreign dependency. In 1920, for example, 87.8 percent of imports and 89.4 percent of exports were carried by foreign-flagged ships, but by the mid-1920s Portugal was already well connected with its European neighbours and its merchant fleet had grown in numbers (Marques 2010, 33).

With the advent of unrestricted German submarine war from February 1915 and later Portuguese participation in the conflict in the following year, the operability of the Portuguese merchant fleet met many obstacles; the fleet recorded several losses during the war, as did many other neutral or belligerent nations. Contemporary historiography estimated numbers, but as yet there is no consensus on an accurate total. Some authors have produced recognizable lists, although it is not the aim of this article to debate these. Our analysis relies on data that have been developed over the last few years.

Anglo-Portuguese Diplomacy and the Seizure of 72 Austro-German Ships

When Great Britain declared war on Germany on August 4, 1914, hundreds of German merchant steamers tried to escape from the Royal Navy, which operated worldwide. The British and the French feared that most of these ships would become auxiliary cruisers, stimulating a global hunt to prevent this. When the war broke out, many of these ships were far away from home, with most anchored in neutral ports such as Manila, Lisbon, Genoa, Buenos Aires and New York (Paul G. Halpern 1995, 66). According to the French historian Marc Ferro (1990, 144), 783 German steamers found refuge in neutral ports, around 10 percent in Portuguese ports. The lack of overseas bases, water, food and coal prevented most German merchant ships from reaching home ports. Unlike the great corsairs of the seventeenth and eighteenth centuries, modern steamers could not remain at sea for long periods of time—coal at regular intervals was much needed (Halpern 1995, 66).

Portuguese ports seemed a good option for many German captains, given the apparent Portuguese “neutrality”¹⁶ and Portugal's Atlantic location. Its colonial empire also provided further options. In addition, some German captains thought that the war would end rapidly and their presence in Portuguese ports would be short. In the summer of 1914, 73 German steamers and two Austro-Hungarian vessels anchored in Portuguese ports, spread across Lisbon, Porto¹⁷, Leixões¹⁸, Setúbal, Madeira, the Cape Verde islands, the Azores¹⁹, Angola, Mozambique and Portuguese India. German “refugee” tonnage in Portuguese ports was more than double that of the entire Portuguese merchant fleet at the time. If we exclude the *Entente* Allies, only the USA and Chile surpassed Portugal in the number of German steamers present

¹⁵ Azorean Cargo Company.

¹⁶ Portugal was the only western power not to declare neutrality or belligerency in the summer of 1914. The Portuguese diplomatic stance was ambiguous.

¹⁷ In 1914, Porto received two German steamers: *Vesta* and *Santa Ursula*. In the next year, the Portuguese Navy forced the *Santa Ursula* to sail to Lisbon, due to Porto's port congestion.

¹⁸ Leixões was Porto's main harbour by this time. The small boat *Sachen* arrived at this port in September 1914, not knowing anything about the war after crossing the Atlantic. Local entrepreneurs bought the ship early on.

¹⁹ There were also two more German steamers in the Azores, the *Excelsior* and *Mohican*. These ships changed from the German flag after they were apparently bought by an American company that operated in the Azores.

in their ports. Nevertheless, German tonnage in Brazil slightly exceeded that of Portugal. These numbers indicate the importance of German-Portuguese commerce. In 1913, for example, 18.9 percent of all ships that entered Portuguese ports were German, and Germany was Portugal's second most important pre-war commercial partner (see Table 2). The "refugee" German steamers in Portugal stayed for more than 18 months in the mainland ports; some stayed even longer in Portuguese colonial ports.

Table 2
Number of Vessels and Steamers Entered in Portuguese Ports, 1913-1915

	1913	1914	1915
German	2,013 (18.9%)	1,297 (14.2%)	1
British	2,418 (22.7%)	1,957 (21.5%)	1,702 (22.5%)
Austro-Hungarian	63 (0.6%)	38 (0.4%)	0
Portuguese	3,569 (33.6%)	3,359 (36.9%)	3,387 (44.9%)
Other Nations	2,575 (24.2%)	2,456 (27.0%)	2,465 (32.6%)
Total numbers of ships	10,638	9,107	7,555

Source: Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1913, 1914, 1915*.

In February 1915, the Germans embraced an unprecedented submarine war around the British Isles without restrictions. By November, the British had already lost 1,021,800 tons in shipping (R.H. Gibson and Maurice Prendergast 2003, 381). The seizure of German steamers anchored in neutral ports started to become appealing, including those present in the ports of Britain's oldest ally, Portugal. On December 30, 1915, Britain requested that the Portuguese republican government seize all the German ships present in its ports. One month earlier, republican left-wing politician Afonso Costa rose to power and opted for a pro-belligerent stance to bring new prestige to the young republic within the *Entente* alliance. This diplomatic strategy aimed to integrate Portugal within the great western powers, in order to dissuade Spanish expansionist ambitions promoted by King Afonso XIII and to unify all Portuguese mainstream political parties in one common cause. Portuguese-German relations were quite bad by this time; several *casus belli* had occurred. German submarines sunk the Portuguese vessel *Cysne* in May 1915 off the French coast and Portuguese-German skirmishes had been common in Portuguese Africa since the beginning of the war.²⁰ A war between the countries seemed inevitable. Costa, a very astute politician, saw the British request as an opening to new opportunities.

Portugal, however, would not seize German steamers unconditionally. Portuguese-British relations had been tense since Portugal adopted republicanism after the October 1910 revolution.²¹ The Portuguese royal family had fled to Britain and pre-war Spanish-British diplomatic rapprochement created some animosity between Lisbon and London. Britain tried its best to distance its oldest ally from the conflict (John Vincent-Smith 1972, 125). Britain feared some inconvenient Portuguese colonial claims in Africa after a hypothetical German defeat as well as the burden of supporting Portugal logistically and militarily due its poor war

²⁰ Portuguese Africa bordered German South West Africa (modern Namibia) and German East Africa (modern Tanzania).

²¹ Britain only recognized the Portuguese republic in September 1911.

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capabilities. However, the presence of the German steamers in Portuguese ports gave Costa the margin to negotiate with Britain.

Table 3
Number of Vessels Seized During the War by Country

Country (year entered war)	Austro-Hungarian	German
Great Britain (1914)	18	279
France (1914)	8	21
Russia (1914)	13	89
Belgium (1914)	0	36
Italy (1915)	not known	36
Portugal (1916)	2	70
USA (1917)	0	90
China (1917)	0	5
Brazil (1917)	0	45
Greece (1917)	not known	not known
Uruguay (neutral)	0	8
Peru (neutral)	0	8
Chile (neutral)	0	84
Argentina (neutral)	0	3
not known	1	0
Total	42	774

Source: *The London Gazette*, *The Edinburgh Gazette*, *The Times*, *The New York Times*, *The Manchester Guardian* and *Les Temps*.

Portugal needed fresh capital. Portuguese finances were in a deplorable state and Portuguese ministers tried to raise a loan of 3 million pounds from the British government. The British initially rejected the possibility of a loan, but soon the Foreign Office started to link the issue to the seizure of the German steamers (ibid, 129). Costa tried to make a diplomatic move by forcing Britain to formally request the seizure in the name of the alliance, so that Portugal would be protected by its powerful ally as well as act according to international law. His gamble worked: on February 17, 1916, London delivered Lisbon the following note: “in the name of the alliance to requisition all the enemy’s ships lying in Portuguese ports” (António José Telo 2010, 355). From February to April 1916 Portugal seized 70 German ships and two Austro-Hungarian vessels; in March 1916, Germany declared war on Portugal. Costa’s government received a loan of 2 million pounds from the British government, the second half granted only after the seizure (Vincent-Smith 1972, 130-131). Portugal got its loan, the ships, the war and British protection.

Anglo-Portuguese negotiations regarding the management of the seized steamers were not easy. The future of these ships remained secret from the Portuguese public for months. Numerous economic entities demanded ships from the government to strengthen import-export activities, although Costa’s government remained silent on this matter. Of the total of

242,441 tonnages in seized shipping, Portugal received only 35 percent totalling 85,208 tons (20 ships) (Egas Moniz 1919, 356). Britain got 65 percent of total tonnage and distributed these vessels to other *Entente* Allies, including France, Italy and Belgium.²² By the end of the war, 38 percent of all these seized ships had been destroyed by German submarines or maritime disasters. German steamers were modern ocean liners and boosted the Portuguese merchant navy in numbers and quality, even though the Allies took obvious advantage of this seizure. The German steamers were given Portuguese names and were used for import-export activities, mostly in coal and wheat during the war.

The Portuguese experience would inspire other countries to do the same. The British Foreign Office tried the same strategy that was used with Portugal towards Brazil and Peru (Rui Ramos 2001, 449), and some sources suggest the same happened with Italy.²³ Foreign newspapers confirm some similarities on this subject: in March 1916, Sir Edward Grey, British Secretary of State for Foreign Affairs, replied to a question in the House of Commons asking if Italy had requisitioned German vessels in the same way Portugal did, arguing that both countries had taken the power to seize them in order to make the utmost use of these units.²⁴

The Portuguese Atlantic Sea and German Submarine Warfare Operations

In this article, we define the “Portuguese Atlantic Sea” as the broad maritime area limited by the Portuguese Macaronesian islands ruled by Lisbon at the time—Azores, Madeira and Cape Verde—and the Portuguese continental coast. This area has its extreme northern point at Cape Villano, in Galicia, Spain, and its extreme southern point at the Nhô Martinho tip of Brava Island, Cape Verde; its longitudinal limits are Ilhéu de Monchique, in the Flores islands, Azores, in the west, and the Spanish port city of Huelva, at the mouths of the Odiel and Tinto rivers, in Andalusia, Spain, in the east. We regard the Portuguese Atlantic Sea not as a maritime area ruled by Portuguese naval forces, but as a geographically-demarcated area which covers most of the naval operations off the Portuguese coast. We have included a considerable part of the Galician and Andalusian coast in this area in order to give us a comfortable margin to include in our analysis some wrecks in the northern part of the Azores as well as the eastern coastal part of the Algarve in southern Portugal.

Various historians have recently tried to provide a definitive number of all wrecks resulting from German wartime submarine activity in this area, but we consider that António Telo’s and Augusto Salgado’s numbers are the most accurate. According to their calculations, German submarines destroyed around 275 ships in this area²⁵, totalling 605,700 gross tons (Telo and Salgado 2018, 128). Telo and Salgado estimate that these numbers represent less than 5 percent of all ships destroyed by German submarines during the Great War (ibid), on the basis that U-boats wrecked 6,349 ships totalling 11.9 million tons (Marcus Faulkner 2015, 61). Despite Telo’s and Salgado’s numbers, our analysis for this article will use numbers that we have studied before (Miguel Brandão 2015). In our demarcated space, we have listed a total of 170 wrecks—52 under the Portuguese flag and 118 foreign-flagged.²⁶

²² Britain got 20 ships; France 23; Italy 14 and Belgium 3.

²³ *The Times*, March 17, 1916.

²⁴ *The Manchester Guardian*, March 22, 1916, 2.

²⁵ Our definition of the Portuguese Atlantic Sea is quite similar to that used by these authors.

²⁶ These numbers were used in Miguel Brandão (2015). For this article we have excluded military naval assets that were sunk in Portuguese waters, which is the case for the French capital ship *Suffren*, and the Portuguese trawlers *NRP Roberto Ivens* and *NRP Augusto de Castilho*. We have also excluded *Desertas*, *Cabo Blanco*, *Benledi* and *Triana*, because they were actually not sunk, contrary to some conventional historiography.

Foreign Shipping Losses and Portuguese Maritime Commercial Flows

In this section we correlate the losses attributable to German submarines with the documentary sources that recorded Portuguese commercial-maritime flows during the Great War in an attempt to comprehend the effect on import-export activities. Primary sources illustrate Portuguese economic weakness, even though the war brought contradictory economic effects. On the one hand, Portugal was unable to access external markets, which contributed to hunger and social convulsions, but on the other hand, some sectors boomed, such as the textile industries, metallurgy and metalworking (Silva and Amaral 2011, 55). Canned fish industries grew particularly fast due to the war circumstances and the same occurred with wines, olive oil and cattle—traditional Portuguese low-value exports (ibid). Nevertheless, in broad terms, the war was catastrophic: economic growth was negative—with an average annual fall of 1.6 percent in GDP from 1914 to 1918 (ibid). The war also confirmed Portugal's dependence on its access to external markets. Pre-war imports were much needed to support cohesion in the Portuguese economy and society: wheat, textiles, machinery, cotton, sugar, coal, codfish, steel and iron were Portugal's major imports (Marques 2010, 29). With the disruption of war, these products became exotic. For example, in 1914, Portugal imported 1,078,892 tons (£767,012) of coal from Great Britain; by the last year of the war, this had fallen to 150,079 tons (£242,741) (Pires 2011, 158). The disruption of international maritime routes, aggravated by German submarine warfare, affected even peripheral economies such as Portugal's.

The number of ships entering Portuguese ports decreased significantly from 1914, with the biggest fall between that year and 1915. This decrease finds its explanation in the commercial disruption between Germany and Portugal, considering that international German commerce stagnated as early as the summer of 1914. By 1915, Portuguese-German import-export activities practically stopped (see Table 2). When the war started, Portugal lost its second most important trade partner, Germany. In 1913, Portugal registered 2,013 German ships that entered its ports, 18.9 percent of that year's total; by 1915, Portuguese authorities recorded only one German vessel. Between the years 1916 and 1917, Portugal listed a drastic decrease of foreign merchant ships, which had, as a direct consequence, an optimization of available naval assets: Portuguese ships started to secure commercial lines that once were made by foreign-flagged vessels. Conclusively, the total number of foreign ships entering Portugal fell in each consecutive year from 1914 to 1918 (Table 4, Panel A).

Regarding losses of foreign ships, the British were the most affected by the German submarine war in the Portuguese Atlantic Sea, listing a total loss of 32 ships. This number is not surprising, considering that Britain was Portugal's main commercial partner during this period and it had, undoubtedly, the world's most vigorous mercantile naval force in the early days of the global conflict. In 1914, the British Empire accounted for 11,287 merchant ships, totalling 20,431,543 gross tons, representing 47 percent of world shipping.²⁷ The war would subvert a British commercial predominance in Portugal only in 1918, reflecting the sharp decrease in British visits since the beginning of the global conflict. Next to the British, the Norwegians registered a significant number of sunken vessels with 22 wrecks and thirdly, the ships that hoisted the Italian flag suffered 18 losses. Other nations also registered significant declines in activity with Portugal, such as France, America, Denmark, and Greece (Brandão 2015, 147). Overall, the importance of foreign-flagged ships in Portuguese commercial flows declined throughout the war. Our data support three conclusions on the impact of German submarine activity on Portuguese port flows.

²⁷ Lloyd's Register of Shipping—*World Fleet Statistics*. Biennials 1913-1914, 961.

Table 4

Number of Vessels and Steamers and Shipping Tonnage Entered in Portugal, 1914-1918

	1914	1915	1916	1917	1918
Panel A: Number of Vessels and Steamers					
Portuguese Vessels and Steamers	3,359	3,387	3,515	4,074	3,961
Foreign Vessels and Steamers	5,748	4,168	3,769	1,786	1,605
Total of Vessels and Steamers	9,107	7,555	7,284	5,860	5,566
Panel B: Shipping Tonnage (t.)					
Total tonnage of Portuguese shipping	1,735,298	1,647,459	1,795,260	1,537,902	1,288,066
Total tonnage of foreign shipping	18,770,036	11,398,442	7,982,851	3,368,697	1,997,767
Total tonnage	20.505.334	13,045,901	9,778,111	4,906,599	3,285,833

Source: Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1914-1918*.

Firstly, the Anglo-Saxon commercial fleets assured to a large extent Portuguese commercial-maritime exchange. During the war the British absorbed most Portuguese exports: from 1914 to 1918 Portuguese exports to Britain continued to grow in absolute numbers.²⁸ Britain was also a vital provider of Portuguese imports, especially much-needed coal. British merchant ships were also those that visited Portuguese ports the most during this period, with the exception of the year 1918 when the Americans took the lead. In 1914 the USA was an insignificant commercial partner, but by 1918 they were one of Portugal's main trading partners: in the first year of the war Portuguese ports recorded the entry of only 10 American ships, but in the last year, primary sources identify 576 ships totalling 856,675 gross tons²⁹—an extraordinary growth. Only the Americans increased their presence in Portuguese ports between 1914 and 1918, which suggests the USA's increasing maritime power on the world stage. Portuguese imports from USA also grew consistently during the war: by 1918, 31 percent of all Portuguese imports came from America (see Table 5 Panel B).

Secondly, neutral merchant fleets such as the Spanish, the Dutch, the Swedish, the Danish and the Norwegian did not fill the gaps left by the major belligerent nations, although the relative importance of Portuguese-Spanish import-export activities grew consistently (see Table 5). This phenomenon has direct and indirect links to the intensification of German submarine activity in major sea theaters of war like the Mediterranean, the Baltic Sea, the North Sea and Bay of Biscay, but also possibly due to the dangers of the navigation in the Atlantic, which offered little protection to these fleets. Furthermore, the German submarine war reached the Atlantic as early as 3 December 1916, when the U-boat U-38 led by Max Valentiner bombarded the city of Funchal, in the Madeira archipelago. This attack, in particular, confirmed Allied fears regarding German submarine activity in a new war theatre—

²⁸ Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1918*, 13.

²⁹ Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1914-1918*.

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the Atlantic Ocean (Gibson and Prendergast 2003, 134). These developments led to a clear decrease in the activity of neutral-flagged ships from the beginning of the war. In broad perspective, between 1914 and 1918, the number of entries by neutral ships diminished, with some rare exceptions (see Figure 1). Relatively important commercial partners of Portugal, like Sweden and the Netherlands, became quite insignificant by the end of the war.

Table 5
Value of Portuguese Commerce in Percentage Terms by Counterpart Country

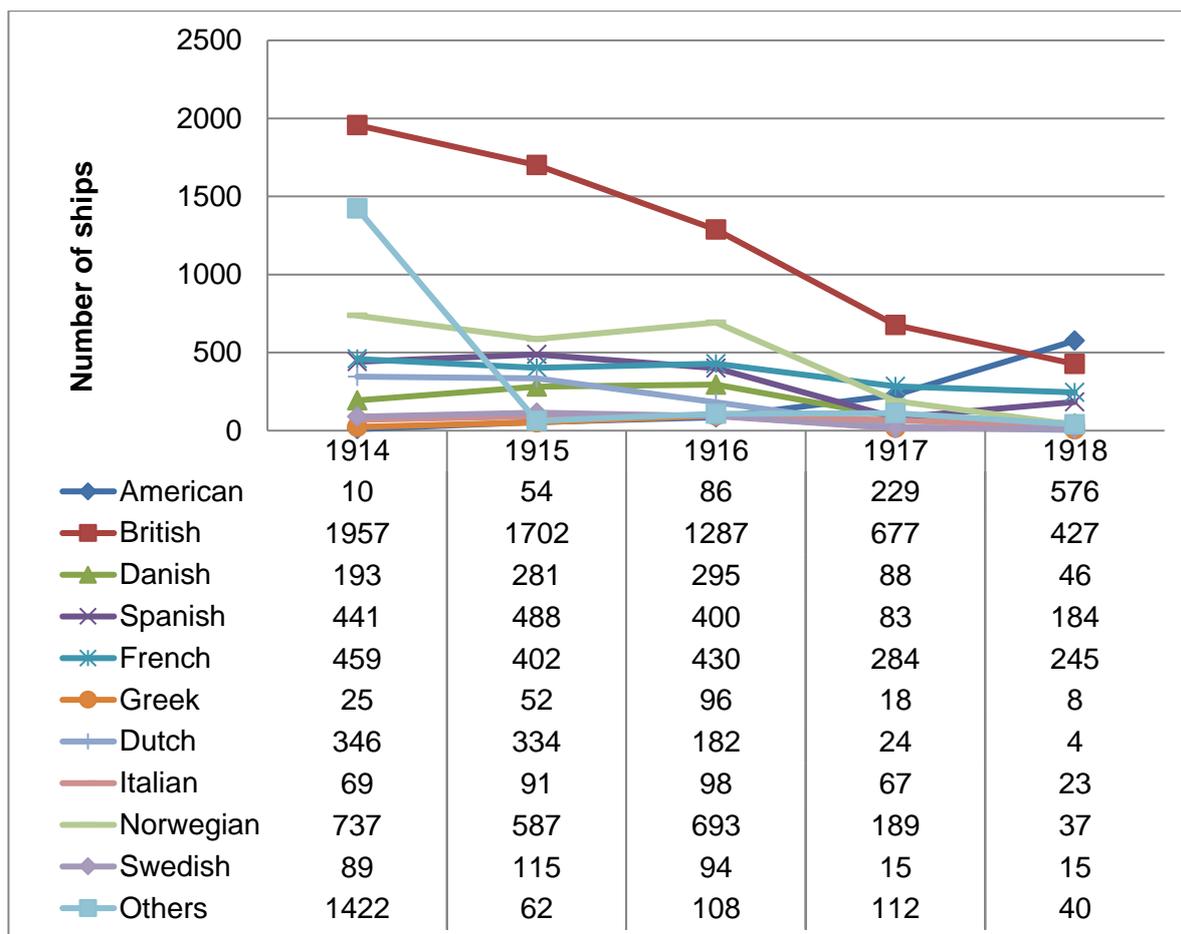
	1914	1915	1916	1917	1918
	%	%	%	%	%
Panel A: Total Import-Export Activities					
Brazil	4.5	5.0	3.6	3.3	2.7
France	4.9	5.3	9.5	10.2	9.8
Germany	11.5	0.5	-	-	-
Great Britain	24.0	29.0	33.0	27.7	30.5
Spain	6.5	7.0	7.5	9.5	13.6
USA	9.3	12.2	14.4	19.3	21.4
Others	39.3	41.0	32.0	30.0	22.0
Total	100	100	100	100	100
Panel B: Imports					
Brazil	2.4	3.4	2.0	2.4	2.0
France	6.2	5.0	4.6	5.5	4.3
Germany	13.5	-	-	-	-
Great Britain	26.2	34.0	40.6	34.5	32.0
Spain	4.8	6.0	7.1	8.9	14.3
USA	10.5	15.4	18.2	24.6	30.9
Others	36.4	36.2	27.5	24.1	16.5
Total	100	100	100	100	100
Panel C: Exports					
Brazil	8.5	7.8	6.2	5.2	4.5
France	2.5	6.1	18.7	19.5	20.3
Germany	7.7	0.2	-	-	-
Great Britain	19.2	20.8	19.0	14.5	28.0
Spain	9.6	8.8	8.1	11.3	12.3
USA	7.1	6.6	7.4	9.0	3.4
Others	45.4	49.7	40.6	40.5	31.5
Total	100	100	100	100	100

Source: Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1918*, 13.

Note: numbers presented in *escudos* (Portuguese currency at the time) converted to percentages.

Thirdly, we highlight the sharp decrease in foreign total gross tonnage that entered Portugal (see Table 4 Panel B). In 1914, Portugal received 20,505,334 gross tons, but by 1918 Portuguese ports only recorded 3,285,833 gross tons; by the last year of the war the gap

between national and foreign tonnage was very short.³⁰ Foreign trade suffered a continuing decline through the war, with an obvious damaging effect on the Portuguese economy overall. Nevertheless, scarce Portuguese maritime resources were optimized, mainly because Portugal received some of the seized German vessels. In the first year of the war, the Portuguese merchant fleet represented only 8.4 percent of the total of entries in national ports but by 1918 this was 39.2 percent. Lack of transport resources did not prevent Portuguese exports from growing in some cases. Portuguese exports to France, for example, grew considerably, especially during 1915-1916 (see Table 5 Panel C).



Source: Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1914 to 1918*.

Figure 1
Nationality of Foreign-Flagged Ships Entered in Portugal, 1914-1918

Our data and conclusions offer a very clear portrait of the degenerating Portuguese supply economy which contributed to the national famine crisis that took over the country. The decline in entries of foreign ships, fewer naval transportation units available, and the contraction of trade routes provoked massive hunger and despair in a fragile society like Portugal's. The country's serious wheat stock mismanagement problem intensified: in 1916 the peninsular republic imported 182,000 tons of wheat (half of national consumption),

³⁰ In 1918 Portuguese ports registered the entry of 1,997,767 tons in foreign tonnage, while Portuguese tonnage entered rounded about 1,288,066 tons; Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1918*, 324.

declining to only 55,000 tons in 1917 (Ramos, Nuno Gonçalo Monteiro, and Bernardo Vasconcelos Sousa 2009, 33). Portuguese historian A.H. de Oliveira Marques suggests the right-wing *coup d'état* led by Sidónio Pais in December 1917 and several strikes by this time were motivated in part by food shortages and by the irregular and disorganized maritime commerce (Marques 2010, 21).

Portuguese Shipping Losses and Portuguese Maritime Networks

Portuguese losses of 52 ships represent 31 percent of the total losses in the Portuguese Atlantic Sea. The majority of these losses were of small wooden vessels, including schooners, trawlers, luggers and dinghies; only 14 were actually steamers, evidence of the poverty of Portuguese maritime resources at the time.

Table 4 leads us to some important conclusions. This table aims to demonstrate a relationship between Portuguese ships sunk by German submarines, with our empirical data extracted from the nautical records from *Estatística Comercial* that registered all entries in Portuguese ports during these years. The number of Portuguese ship entries does not necessarily reflect a decreasing number of available ships at the time, but is definitely a good indicator of the state of maritime commerce in global terms. Table 4 (Panel A) confirms a slight growth in the number of anchored Portuguese ships between 1914 and 1917, with a significant decrease in 1918. Concerning Portuguese tonnage, there is a slight decrease in 1915 and modest growth in 1916, but by the last year of the war Portuguese ports registered only 1,288,066 tons, significantly less than the 1914 numbers (see Table 4, Panel B). The 1917 numbers are quite synchronous with the advent of German submarine war in a global perspective: by 1917 German U-boats sunk 3,255,600 tons in all maritime theaters (Gibson and Prendergast 2003, 382). In this same year, Portugal lost 35 ships.

Table 6 shows that ocean steamers and short-sea shipping gained in importance during the conflict, which seems paradoxical. Coastal shipping recorded a rise during the first two years of the war, but dropped significantly in 1917 and 1918. The data presented in *Estatística Comercial* suggest that the use of ocean steamers increased until 1916, although thereafter practically stagnated.³¹ It is also clear that coastal shipping and short-sea vessels declined in importance during the conflict, even though wooden vessels secured some ocean and coastal trade routes, especially in the three years of the war.³²

Table 6
Number of Ships Employed on Oceanic Routes, Coastal Routes and Short-Sea Routes, 1914-1918

	1914	1915	1916	1917	1918
Oceanic Routes	209	301	393	344	411
Coastal Shipping	111	131	150	92	68
Short-Sea Shipping	3,039	2,955	2,972	3,638	3,482

Source: RP-MF-DGE - *Estatística Comercial—Comércio e Navegação – 1914 to 1918*.

In analysing this panorama, we have asked the following question: did submarine warfare change the main navigation axis of Portuguese-flagged ships during the Great War? Some documentary sources shed light on this matter, particularly in relation to the Portuguese islands, but we do not yet have enough data to draw a truly enlightening picture, and we are

³¹ Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1914-1918*.

³² Portuguese Finance Ministry. *Estatística Comercial—Comércio e Navegação 1914-1918*.

uncertain about some coastal areas of the country. According to our research, it is clear that the Portuguese archipelagos—Azores, Cape Verde and Madeira—were dependent on maritime commerce to support their economies and suffered the most from German submarine sorties.

The Madeira Islands are probably the best-documented case in this regard. According to the local newspaper *Diário da Madeira*, the Portuguese steamer *San Miguel*, one of the few supply steamers that anchored in Madeira and the Azores during the war, immediately changed its course after the December 1916 German bombardment of Funchal in Madeira.³³ This ship in particular avoided Madeira for a while. Also, a Portuguese civilian and student at Coimbra University, Silvano Sátiro Silva, wrote some articles concerning how German submarine activity isolated the Madeira Islands from “the world”. In an article in the Portuguese newspaper *A Capital*, Silvano stated that several foreign-flagged ships stopped visiting the port of Funchal because of regular German submarine activity around the Madeira Islands: this aspect clearly led Madeira to a supply problem and therefore a massive hunger within the local population.³⁴ Silvano even speaks about a “submarine blockade” in the Madeira Islands.³⁵ Governmental documentation regarding parliamentary discussions at the time recorded that Portuguese deputies who represented the Madeira and Cape Verde Islands forced the Portuguese government to make it mandatory for Portuguese oceanic steamers to visit these ports.³⁶

In the Azores, the situation was quite different, based on alerts raised by Azorean deputies. The lack of shipping transportation and some vessels sunk by German submarines around this archipelago were common matters discussed in the Portuguese republican congress.³⁷ Later, American support in the war would slowly mitigate supply issues in these islands (Telo and Salgado 2018, 43), and the Americans built up a base there in the winter of 1917.

Social and Economic Impacts of German Submarine Warfare in Portugal

The Portuguese press is quite enlightening on how Portuguese society perceived the German submarine campaigns in the Portuguese Atlantic: the crewmen of German U-boats were called “pirates”³⁸ and their incursions were designated as “boche piracy”³⁹ and “piracy work”.⁴⁰ Along with the press, the Portuguese political class was not indifferent to this underwater weapon: in November 1916, António José de Almeida, Portuguese president of the Ministries from March 1916 to April 1917, claimed that German underwater action in the Algarve area was one of the reasons for the postponement of local administrative elections⁴¹; this episode caused some sarcastic interventions by several republican deputies and senators.⁴² However, this parliamentary incident did not overshadow the economic problems resulting from the submarine war. In December 1916, António José de Almeida, after the bombing of Funchal and the attack on the Portuguese gunboat *Ibo* in Cape Verde, declared to the country that the Atlantic was “dotted” with submarines.⁴³ From this moment on, submarine warfare became a very recurrent theme in republican parliamentary debates, to the point that the minister of the

³³ *Diário da Madeira*, January 3, 1917, 1.

³⁴ *A Capital*, December 27, 1917, 1.

³⁵ *A Capital*, December 27, 1917, 1.

³⁶ *Diário da Madeira*, January 4, 1917, 1.

³⁷ Portuguese Republic—Senate Diary, May 8, 1917, 13.

³⁸ *A Capital*, May 5, 1916, 1.

³⁹ *O Século*, October 9, 1918, 1.

⁴⁰ *O Século*, September 5, 1918, 1.

⁴¹ Portuguese Republic—Deputies Chamber Diary, November 8, 1916, 7.

⁴² Portuguese Republic—Deputies Chamber Diary, January 14, 1916, 23; February 9, 1917, 37.

⁴³ Portuguese Republic—Senate Diary, December 6, 1916, 7.

navy during Almeida's government, Victor Hugo de Azevedo Coutinho, listed all the sunken ships in the Senate.⁴⁴ The minister's listing was applauded, given the government's censorious approach to the national press on this matter.⁴⁵

Primary sources offer interesting testimonies on the economic aspects of submarine warfare. The analysis of parliamentary debates is particularly fruitful in this area, where the political and social perceptions of submarine warfare can be observed more accurately. In December 1916, the situation did not seem worrying for the Portuguese political class. Deputy Costa Júnior stated that, by this time, Portugal was the country where the supply crisis was least felt, due to its geographical location and the insignificance of German Atlantic submarine operations.⁴⁶ However, the following month the parliamentary tone was completely different: deputy Jorge Vasconcelos Nunes questioned the Minister of Labour and Finance in the Chamber of Deputies about exponential increases in the prices of essential goods, due to the shortage of transport and the reluctance of ship-owners to create more shipping lines, as a result of submarine action.⁴⁷ Almost a year later, the Republican Senate admitted a more difficult situation: the intensity of submarine warfare had exponentially increased the price of freight and maritime insurances, as well as of wheat supplies.⁴⁸

The primary sources that we have consulted are clear about the impacts produced by the range of the submarines. According to our research, the obstacles to navigation affected above all the price of basic and second necessity goods and the price of freight and maritime insurances, and worsened economic sustainability in mainland and insular Portugal. Through the analysis of Portuguese newspapers and the electronic databases uboat.net and wrecksite.eu, we were able to ascertain the cargos and destinations of the ships sunk off the Portuguese coast. At least 24 of the sunken ships had Portuguese ports as a destination. A good example of this is the case of the Danish steamer *Terje Vikken* which carried significant quantities of wheat destined for the port of Lisbon and was sunk by a German mine laid by a submarine.⁴⁹ Like the *Terje Vikken*, the majority of the ships that were heading to Portugal carried food, raw materials and fossil fuels.

The important question remains: which economic sectors were most affected by the German underwater campaign? Our research provides some answers. In short, fisheries, navigation companies and some industries were affected, although we believe that the fishing sector was that most affected. There are strong indications that this industry experienced a remarkable crisis during this period. We were able to ascertain at least 10 sunken ships belonged to entities linked to the fishing and fish canning sectors, such as the companies *Sociedade das Pescarias de Viana*, *Lusitânia Companhia Portuguesa de Pesca*, and *Parceria de Pescaria Portuense*. Several Portuguese newspapers indicate that some local fishing trawlers could not operate because of German submarine activity. For example, in December 1917, several fishing trawlers remained at the port of Leixões, in Porto, fearing a submarine sortie on the northern Portuguese coast; during these months local communities undertook only intermittent fishing activity.⁵⁰

Secondly, we can see that some of the sunken ships belonged to major Portuguese industrial corporations, for example the steamer *Lusitano*, which belonged to *Companhia União Fabril*, and the lugger *Gamo* which belonged to *Empresa Salles*. Other representative examples are the steamer *Espinho*, which belonged to *Transportes Marítimos do Estado* and the ship *Serra do Gerês*, which belonged to *Empresa Industrial Marítima*. Overall, we have

⁴⁴ Portuguese Republic—Senate Diary, March 15, 1917, 21.

⁴⁵ Ibid.

⁴⁶ Portuguese Republic—Deputies Chamber Diary, December 20, 1917, 7.

⁴⁷ Portuguese Republic—Deputies Chamber Diary, January 24 1916, 22.

⁴⁸ Portuguese Republic—Senate Diary, February 2, 1917, 11.

⁴⁹ *O Comércio do Porto*, April 18, 1916, 2.

⁵⁰ *O Comércio do Porto*, December 18, 1917, 1.

counted 37 sunken Portuguese vessels and steamers belonging mainly to local seafaring capitalist consortiums or Portuguese industrial entities with regional-local importance. Portuguese maritime cities like Aveiro, Figueira da Foz, Lisbon, Porto, Olhão and Viana do Castelo were particularly affected by German submarine sorties off the continental Portuguese coast.

Regarding the social impacts of the German submarine war, we highlight two phenomena that we were able to identify through primary sources. The first is the mobilization of Portuguese society which tried its best to help the victims of the submarine war and their families. Some important members of the Portuguese elite and even some industrial entities gathered resources to minimize the social impacts of the war at sea. The best example would be the U-boat UC-67's sortie on four fishing trawlers off the fishing town of Cascais, near Lisbon, in the spring of 1917. This particular episode affected national morale and a wave of compassion conquered many Portuguese hearts. Portuguese Navy regular marines and some officers organized a national petition to support the victims of this attack. Also, several national industrial corporations, such as *Companhia Carris de Ferro de Lisboa*, *Companhia União Fabril* and *Companhia Fluvial de Navegação*, responded with significant donations to the Navy. Later, the bourgeoisie and the aristocratic and industrial elites also made significant donations.⁵¹ In the previous winter the same pattern had already occurred after the December 1916 bombing of Funchal.⁵²

Finally, we highlight the apparent cases of civilian cooperation with the enemy, as we were able to verify in Madeira, the Algarve and, more significantly, in the northern Portuguese coastal town of Esposende. The latter case is particularly interesting. According to local newspapers, several egg boxes were seized by local authorities who had concluded that these goods were destined for German submarine crews.⁵³ We have no serious evidence that this actually happened, but the episode forced the civil governor of Braga, Eduardo Cruz, to visit the site to investigate the case.⁵⁴ Some sources assure that Cruz confirmed this civil cooperation was practiced along a wide stretch of the northern Portuguese coast, between Apúlia and Sao Bartolomeu do Mar.⁵⁵ The case would gain notoriety: the Portuguese Navy Ministry investigated similar cases in other districts around the country after this incident⁵⁶, and this matter subsequently reached the Chamber of Deputies.⁵⁷ Regardless of the veracity of this episode, the climate of suspicion, on behalf of local and governmental authorities, was undeniable. Great Britain itself admitted this reality throughout the entire Iberian Peninsula (Telo and Salgado 2018, 102-103).

Conclusions

Despite the results of our research, it is not yet possible to understand if the direct impacts of the German submarine war were more significant than the indirect ones. However, it is absolutely clear that the Portuguese archipelagos were directly buffeted by submarine warfare. The German incursions inevitably isolated these territories: their obsolete coastal defences and their peripheral geographical position led foreign-flagged and Portuguese-flagged ships to avoid them. Even Portuguese shipping companies which had regular routes to these islands opted to avoid these ports. In addition, freight rates skyrocketed to the point

⁵¹ *A Capital*, April 14, 1917, 3.

⁵² *Diário da Madeira*, July 1, 1917, 1.

⁵³ *O Século*, May 3, 1917, 3.

⁵⁴ Portuguese Navy Archive—Core 419, May 19, 1917.

⁵⁵ *O Primeiro de Janeiro*, May 6, 1917, 1.

⁵⁶ Portuguese Navy Archive—Core 419.

⁵⁷ Portuguese Republic—Deputies Chamber Diary, May 8, 1917, 25.

where the *Empresa Insulana de Navegação* charged a 100 percent surcharge in mid-1917.⁵⁸ In contrast, the situation in continental Portugal appears less serious; however, the port of Lisbon, the country's main economic epicenter, hoarded many goods that came from abroad, which created serious social convulsions throughout the country. In addition, we believe that even before Germany operated in the Atlantic, Portugal was already feeling the indirect impacts of the unrestricted submarine war around the British Isles since February 1915. High freight prices and the lack of foreign-flagged transportations were already complicating Portuguese economic performance.

The question still remains: did the Portuguese economy suffer more directly from the German submarine war in the Portuguese Atlantic than indirectly or vice versa? Perhaps an element of both would be the most prudent answer for now. Valentiner's attack on Funchal on December 3, 1916 effectively started the submarine war in the Atlantic, leaving the Allies fearful and surprised (Gibson and Prendergast 2003, 134). Although the attack surprised the Allies, the Portuguese Atlantic was a minor naval theater pretty much throughout the war. According to Eric Soundhaus, the bombing of Funchal by U-38 and German sorties off the Algarve coast in the Portuguese Atlantic were no more than a momentary extension of Mediterranean naval confrontation (Soundhaus 2017, 193). Soundhaus assumes that the operability of U-boats in the Portuguese Atlantic (the Azores-Madeira-Gibraltar-Lisbon axis) in the period 1917-1918 was largely due to the German inability to detect the main Allied convoy lines (ibid). In short, the Portuguese naval theater was a peripheral naval stage when German submarines ventured further from the main naval theaters of war, like the North Sea, the Mediterranean and the Bay of Biscay. Thus, the incorporation of the Portuguese Atlantic in the range of submarine action may have aggravated the Portuguese supply crisis in a centrifugal way, even if it was already damaging it indirectly as early as the summer of 1914 with the disruption of Portuguese-German commerce and with unrestricted submarine war around the British Isles since February 1915.

We are still very far from fully comprehending the indirect impacts of the German submarine war on Portugal. It will be necessary to undertake an unprecedented cross-referencing of primary sources in order to quantify all Portuguese material losses outside of the Portuguese Atlantic; this will then enable us to correlate Portuguese seaborne economic mechanics with the various phases of the German submarine war. By ascertaining which commercial ties were broken by the German submarine weapon, we can gain a clear perception of its indirect impacts. For now, it is safe to say that we have a better understanding of its direct consequences.

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⁵⁸ *Anais do Clube Militar Naval*—Tome XVIII, 1917, 291.

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