A 100 Year Commemoration: Costs of Neutrality to Norway

Centenaire de la Première Guerre mondiale : les coûts de la neutralité pour la Norvège

Arild Sæther and Ib E. Eriksen
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Arild Sæther* and Ib E. Eriksen**

This analysis provides an outline of key social, economic and political challenges that faced Norway during World War I. The context of our discussion is Norway’s aim to remain a neutral European power. The country’s preparedness for war, how the government tackled issues it faced and the policies it pursued are considered. The costs of the war in the short term and in the long term are deliberated.

Keywords: economic history, World War I, fiscal and monetary policy, economic growth, Norway

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Cet article offre un aperçu des défis sociaux, économiques et politiques auxquels la Norvège a dû faire face lors de la Première Guerre mondiale. Notre contexte d’analyse est la volonté norvégienne de demeurer un pouvoir européen neutre. Nous rendons compte de la préparation du pays pour la guerre, de la manière dont le gouvernement a géré les problèmes qui se présentaient, ainsi que les politiques alors mises en place. On considère ensuite les coûts du conflit, à court et long terme.

Mots-clés : histoire économique, Première Guerre mondiale, politique fiscale et monétaire, croissance économique, Norvège

JEL : N14, N24, N34, N44, O52

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This year it is 100 years since “The war to end all wars” ended. In most belligerent countries, in this tragic European conflict, this event will be commemorated not only by ceremonies in cathedrals and churches, but also on the battlefields and the cemeteries were hundreds of thousands of soldiers are buried. New books and articles will be written trying to analyse all aspects of this terrible war. However, this occasion should also be remembered and reflected on in countries that tried to stay neutral but were dragged into the maelstrom of a war that inflicted on them considerable economic, financial and human costs.

The purpose of this article is to analyse, by investigating available statistics and domestic and foreign literature, how a small country Norway, with a population of a little less than 2.5 million (1914), that tried to stay neutral, and defend livelihood and welfare of its people, was drawn into the turmoil of World War I and what effect it had on its people and economy.

This will be carried out by first briefly discuss the pre-war situation, the country’s preparedness for war and how the government tackled the new challenges it was faced with, and the policies it pursued during the war years. More recent literature that to some extent challenge the opinion of the older will be discussed. Second the financial cost of keeping a high level of military preparedness, the problems of neutral shipping and the enormous cost the German unrestricted submarine war had on the Norwegian merchant marine and society at large will be deliberated. Third an outline of the monetary and fiscal problems, the destruction of production capacity and the social costs of being drawn into the war will be provided. Finally, the difficult transition from war to peace and the post war collapse and its consequences for the interwar period will be briefly discussed. Throughout this account the developments in Norway will as much as possible be viewed in a Scandinavian and West European perspective.

1. The Pre-War Picture

In the 19th century the ideal of a liberal constitutional state had a strong position in the Western world. The economic liberalism that started with Adam Smith and Jean-Baptiste Say had dominated the economic thinking, favouring the abolishment of privileges, introduction of free competition in domestic markets and international trade. However, from the 1890s and onwards these economic policies had been challenged by a more protectionist tradition and a growing need, particular in smaller countries, to secure control over national resources. There was also a growing awareness in many countries that governments had a responsibility for the wellbeing of their people. This resulted in many cases in new laws and regulations to se-
cure industrial safety, social insurances and better health conditions for all social groups. Joseph Schumpeter (1954, 761) called this period ‘the defeat of liberalism.’ However, this is probably stretching it too far.

The Treaty of Kiel in 1814, marked the end of the Napoleonic wars in Northern Europe. It forced the Danish-Norwegian absolute king, who had supported Napoleon, to send Norway to Sweden. The Norwegians revolted and elected their own parliament, but was forced into a personal union, with the same king as Sweden. However, Norway kept its own parliament and government. In 1905 Norway opted to break out of this union and gained full independence. In a referendum its people elected a Danish prince as its king. Luckily the dissolution of the union was peaceful. This laid the foundation for a peaceful and prosperous development of both Norway and Sweden.

In Norway there was a growing fear that our natural resources; waterfalls, forests, fishery and mining resources etc., which we needed to develop our country, could be taken over by foreign big business interests. This would undermine the country’s new-founded independence and the Norwegian could risk becoming “a hired hand in his own state, employed by foreign masters” (Berg, 2012, 48). The Parliament therefore acted fast and passed, after heated debates and protests from among others Great Britain, the concessions laws (konserningslovene) in 1906, 1909 and 1917. These laws greatly regulate foreign access to the acquisition of waterfalls on other natural resources.

Today there is a general agreement that these laws, together with laws and regulations that improved working conditions and people’s health, contributed positively to the economic development after independence. Professor Wilhelm Keilhau (1952, 137) claimed that one of the most pronounced periods of economic expansion in Norway was between 1905 and 1914.¹ Hydroelectric power plants were developed, and manufacturing industries based on hydroelectric power were constructed. Merchant fleet technology shifted from sail to steam. Agricultural production was modernized.

Studies by OECD shows that, although Norway’s GDP per capita in 1914, Table 1, was still only 73.5% of the average of the 12 countries of Western Europe, its growth in these years since full independence,

¹ Wilhelm Christian Keilhau (1888-1954) became reader in political economy and statistics at University of Oslo in 1921 and professor in 1934. He was a pronounced Norwegian economist with strong opinions particularly in the field of monetary policies. The many books he wrote on history and economic history had a marked impact on the writings of Norwegian history in the 20th century. His book on Norway and the World War published in 1927 is still an important source for the impact of the war on the Norwegian economy. Keilhau was strongly against the reintroduction of the gold standard in the 1930’s. After WWII he headed the Norwegian delegation to the Bretton Wood conference. A conference which agreed on a series of new rules for the world’s monetary system after WWII.
1905-14, was 28.2%, Table 2. It is only Italy that has as high growth in these years, also 28.2%. (Maddison, 2006, 438-439). These years saw also high economic growth in the other Scandinavian countries, Denmark in third place with 22% and Sweden in fourth place with 13%. The average growth for all the twelve West European Countries was 8%. The economic outlook for continuous growth in the three Scandinavian countries was therefore good. Regrettably, these years of growth ended in the second year of the war.

Table 1. GDP Per Capita in 12 West European Countries 1905-1922 (1990 International Geary-Khamis dollars)

<table>
<thead>
<tr>
<th>Countries</th>
<th>1905</th>
<th>1914</th>
<th>1915</th>
<th>1916</th>
<th>1917</th>
<th>1918</th>
<th>1920</th>
<th>1921</th>
<th>1922</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>1974</td>
<td>2530</td>
<td>2611</td>
<td>2669</td>
<td>2399</td>
<td>2286</td>
<td>2780</td>
<td>2518</td>
<td>2784</td>
</tr>
<tr>
<td>Denmark</td>
<td>3346</td>
<td>4110</td>
<td>3778</td>
<td>3891</td>
<td>3617</td>
<td>3459</td>
<td>3992</td>
<td>3826</td>
<td>4166</td>
</tr>
<tr>
<td>Sweden</td>
<td>2691</td>
<td>3048</td>
<td>3028</td>
<td>2968</td>
<td>2584</td>
<td>2523</td>
<td>2802</td>
<td>2674</td>
<td>2906</td>
</tr>
<tr>
<td>Austria</td>
<td>3090</td>
<td>2876</td>
<td>2653</td>
<td>2628</td>
<td>2586</td>
<td>2555</td>
<td>2412</td>
<td>2650</td>
<td>2877</td>
</tr>
<tr>
<td>Belgium</td>
<td>3882</td>
<td>3923</td>
<td>3858</td>
<td>4080</td>
<td>3519</td>
<td>2861</td>
<td>3962</td>
<td>4056</td>
<td>4413</td>
</tr>
<tr>
<td>Finland</td>
<td>1742</td>
<td>2001</td>
<td>1882</td>
<td>1893</td>
<td>1581</td>
<td>1370</td>
<td>1846</td>
<td>1884</td>
<td>2058</td>
</tr>
<tr>
<td>France</td>
<td>2894</td>
<td>3236</td>
<td>3298</td>
<td>3463</td>
<td>2979</td>
<td>2396</td>
<td>3227</td>
<td>3075</td>
<td>3610</td>
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<td>2963</td>
<td>2796</td>
<td>3078</td>
<td>3331</td>
</tr>
<tr>
<td>Italy</td>
<td>1984</td>
<td>2543</td>
<td>2810</td>
<td>3139</td>
<td>3301</td>
<td>3392</td>
<td>2587</td>
<td>2528</td>
<td>2631</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3594</td>
<td>3868</td>
<td>3926</td>
<td>3956</td>
<td>3727</td>
<td>3352</td>
<td>4220</td>
<td>4431</td>
<td>4599</td>
</tr>
<tr>
<td>Switzerland</td>
<td>3913</td>
<td>4233</td>
<td>4290</td>
<td>4277</td>
<td>3804</td>
<td>3798</td>
<td>4314</td>
<td>4208</td>
<td>4618</td>
</tr>
<tr>
<td>Great Britain</td>
<td>4520</td>
<td>4927</td>
<td>5288</td>
<td>5384</td>
<td>5421</td>
<td>5459</td>
<td>4548</td>
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<td>4637</td>
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<tr>
<td>Average</td>
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<td>3633</td>
<td>3534</td>
<td>3431</td>
<td>3305</td>
<td>3313</td>
<td>3582</td>
</tr>
</tbody>
</table>

Source: Maddison (2006, 438-441, Table 1c)

Table 2. Percentage Growth in GDP Per Capita in 12 West European Countries 1905-1922 (1990 International Geary-Khamis dollars)

<table>
<thead>
<tr>
<th>Countries</th>
<th>1905-1914</th>
<th>1914-1918</th>
<th>1918-1920</th>
<th>1920-1921</th>
<th>1921-1922</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>28.2</td>
<td>-9.6</td>
<td>21.6</td>
<td>-9.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Denmark</td>
<td>22.8</td>
<td>-15.8</td>
<td>15.4</td>
<td>-4.2</td>
<td>8.9</td>
</tr>
<tr>
<td>Sweden</td>
<td>13.3</td>
<td>-17.2</td>
<td>11.1</td>
<td>-4.6</td>
<td>8.7</td>
</tr>
<tr>
<td>Austria</td>
<td>-6.9</td>
<td>-11.2</td>
<td>-5.6</td>
<td>9.9</td>
<td>8.6</td>
</tr>
<tr>
<td>Belgium</td>
<td>1.1</td>
<td>-27.1</td>
<td>38.5</td>
<td>2.4</td>
<td>8.8</td>
</tr>
<tr>
<td>Finland</td>
<td>14.9</td>
<td>-31.5</td>
<td>34.7</td>
<td>2.1</td>
<td>9.2</td>
</tr>
<tr>
<td>France</td>
<td>11.8</td>
<td>-26.0</td>
<td>34.7</td>
<td>-4.7</td>
<td>17.4</td>
</tr>
<tr>
<td>Germany</td>
<td>-1.5</td>
<td>-2.5</td>
<td>-6.3</td>
<td>10.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Italy</td>
<td>28.2</td>
<td>33.4</td>
<td>-23.7</td>
<td>-2.3</td>
<td>4.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7.6</td>
<td>-13.3</td>
<td>25.8</td>
<td>5.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>8.2</td>
<td>-10.3</td>
<td>13.6</td>
<td>-2.5</td>
<td>9.7</td>
</tr>
<tr>
<td>Great Britain</td>
<td>9.0</td>
<td>10.8</td>
<td>-10.7</td>
<td>-2.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Average</td>
<td>8.2</td>
<td>-2.6</td>
<td>-2.6</td>
<td>0.7</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Source: Maddison (2006, 438-441, Table 1c)
The Jubilee exhibition in the capital Kristiania in 1914 celebrated the first hundred years of Norwegian independence. It marked the founding of the constitution and Parliament in 1814. This became a show case for progress in manufacturing and arts. A sense of self-approval existed, and the country did not wish to be engaged in any international conflict. It wanted to pursue an independent foreign policy based on neutrality combined with an active trade policy. The country did not wish to be engaged in any international conflict. The new Foreign Minister in 1905, Jørgen Løvland, had outlined a foreign policy for the newly independent Norway, rooted in the perception of the country’s geographical remoteness from the areas of conflict on the European continent, and “a wish to be left alone in order to get on with building a new nation” (Haug, 2016, 2). Like the other Scandinavian countries, Norway’s security “was non-alignment in peace and neutrality in war” (Hobson et al., 2012, 13). In this context the Integrity Treaty of November 1907, in which a guarantee of the country’s territorial integrity was given by Great Britain, France, Germany and Russia, was also important.

However, Norway was also depended on Great Britain for its security. In this connection should one incident be mentioned. In the summer of 1908, on the occasion of a visit of ships of the British navy, Prime Minister Gunnar Knudsen (1848-1928) let in a formal dinner speech, slip the following statement: “But if the possible comes to pass, we shall place our trust in the British nation, mindful of the new link forged by our Queen [She was the daughter of king Edvard VII].” This declaration was duly reported by the press. The Prime Minister claimed he was misquoted but the incident nevertheless served to underline the widespread impression of Norway’s reliance on Great Britain (Riste, 2005, 79).

Norway’s trade policy, which was very important for its large merchant marine and thereby for the welfare of its people, was based on a belief in international law. Especially that the duties of the London Declaration of 1909 would, in case of a war, be respected by the belligerents. Unfortunately, it took only a couple of months of war to prove that this assumption wrong (Haug, 2016, 3).

Unfortunately, there were dark clouds on the horizon for international politics. France, Germany and Great Britain fought for influence and the tension between the countries of the Entente, Britain, France and Russia and the Central powers, Germany and Austria-Hungary, had increased since the turn of the century. Indeed, it brought the world to the edge of war in 1911. In the following years,

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2 The capital changed its name from Kristiania to Oslo in 1925.
3 The London Declaration was an international code of maritime law, especially as it relates to wartime activities. The declaration dealt with many controversial points, including blockades, contraband and prize and showed greater regard to the rights of neutral entities.
nationalism grew, and the tense international climate not only persisted but escalated. The mood was that a war between some of the European countries was overdue, although most politician and business leaders, at the time, thought it would be limited and short.

At that time most of the parliamentarians, business leaders and the population at large in Norway feared, that the country could be drawn into a conflict between some of the great powers, and in particular between Germany and Great Britain. No one thought that in a European conflict the belligerent powers would try to occupy the whole country, but because of the Norwegian coast flanking the debouches to the North Sea and the North Atlantic, they feared that either Germany or Britain might try to occupy some important coastal cities and create navy bases there. The German general stab had ordered an operational plan for a war situation between Germany and Norway. At the end of 1915 or the beginning of 1916 such a plan, ‘Kriegsfall Norwegen,’ was ready for use (Haug, 1995, 438). This plan was based on a situation in which Britain had gained access to the Norwegian coast. Børre Reidar Gundersen (2005, 101) claims that the German general Erich Ludendorff in 1916 appraised if an attack on Norway was appropriate, but decided against it and stopped further planning. The British admiralty discussed in December 1916 the possibility of establishing a naval base in Norway (Andersen, 2017, 324). Hobson et al. (2012, 11) contends that the Scandinavian countries escaped war with a much narrower margin than was generally realised in the immediate aftermath of 1918.

The situation before the outbreak of war can in coarse features be outlined as follows. For centuries Norway had, as no other West European country, been dependent on imports of grain and other victuals for the survival of its people. As the country became more industrialized it also increasingly relied on imports to maintain its industrial capacity. Its industry needed raw materials and energy supplies, like coal and coke, to keep its production going and its people employed. Its merchant marine, in 1914 the fourth largest in the world, represented the economic back-bone of the country (Berg, 2012, 49). The salaries from thousands of seamen’s, the profits for the shipowners and the foreign exchange it earned, were vital for the welfare of the Norwegian people. Therefore, it was imperative to have access to imports, and that its merchant marine could continue to carry on its business of transporting goods not only in and out of the country, but on the open seas between foreign ports.

In case of war Norway’s merchant marine with 3300 ships, and a gross tonnage of 2.6 million, was potentially an invaluable resource for Great Britain and the Entente in transporting victuals, raw materials and other goods important for the war effort. Germany and the Central powers, on the other hand, would do whatever they could to
prevent or limit their enemies from the benefit and use of Norwegian ships.

Great Britain bought some Norwegian exports, particularly fish products, but was not in any way dependent on it. It could rely on its Empire for necessary provisions if it could be transported. Norway on the other hand, relied on Britain for the import of fuel and supplies for its industries in general and its fishery industry in particular. Germany and the Central powers were dependent on provision from neutral countries if war protracted. From Norway they wanted pyrites, iron ore, nickel ore, copper ore and victuals such as cod, herring, sprat, and mackerel. It was therefore important to keep the transport lines of these products open.

Britain and the Entente planned to introduce a total blockade of the Central powers, in case of war. Such a policy would force neutral countries, like Norway and the other Scandinavian countries, to minimise their export to the Central powers. Furthermore, the Norwegian merchant marine could be pressured into joining the war efforts of the Entente. Germany on the other hand laid plans to secure its imports from Norway and the other neutral countries and furthermore to prevent the British gaining control over the Norwegian fleet, by threatening to use its navy and particularly its large fleet of submarines against enemy and neutral shipping (Fuglum, 1978, 483). It was therefore clear that Norway, as no other neutral country, would face severe difficulties if a war should break out.

Despite these alarming facts during the Spring of 1914, the Norwegian people, its government, local authorities and its business community, like most other European countries at the time, lived in a bubble. As the clouds of war darkened, the country failed to prepare itself. No extra provisions of grain and other victuals, raw materials or fuels, like coal and coke had been stored by either the state, local authorities or the private sector (Jæger, 1914, 176).4

In a debate in the Parliament in February 1914 the Prime Minister Gunnar Knudsen from the Liberal Party answered a suggestion to increase military spending with these words: “What is happening? It should be of interest to know. At this moment the situation is such that the political sky, viewing it from a world political setting, is free of clouds, in such a way that has not been seen for many years” (Fuglum, 1978, 475). As late as early summer of 1914, the feeling that the foreign policy situation did not cause any immediate anxiety was common “also in countries that soon would be drawn into the war” (Fuglum, 1989, 198).

4 Oskar Gustav Jæger (1863-1933) was professor of economics and statistics at University of Oslo from 1902. He is considered the first of the moderns in Norwegian economics. During WW1 he was critical to the inflationary monetary policy of the Bank of Norway and the government of Prime minister Gunnar Knudsen.
According to Jæger (1914, 162), the most sensitive barometer for rough political weather is the fall in rates on the great foreign exchanges. Before the declaration of war, a sharp fall in the rates of European government bonds took place. In Norway the signs of unrest should also have become clear when people in the summer started to withdraw money from their bank accounts. Moreover, when Germany at the end of July declared a state of siege, people became very nervous and tried to redeem their notes for gold.

2. Government Policy During the War

When the Austrian-Hungarian Empire declared war on Serbia on July 28 and Russia announced a general mobilization on July 30 1914, it turned out that the Prime minister Gunnar Knudsen, who certainly could be accused of inactions in the months before the outbreak of the war, quickly understood to readjust to the new situation and the demands that followed from it (Fuglum, 1978, 479). His Government acted decisively, fast and started mobilization of its armed forces.

When Germany declared war on Russia on August 1, the Bank of Norway increased its discount rate. When private banks restricted withdrawals from accounts, panic broke out. Across the country people queued at their local banks to withdraw money from their deposits. In larger towns people put the Bank of Norway and its offices under siege. They wanted to redeem their bank notes into gold. At the same time, there were a run on grocers’ stores, coal and coke dealers, bakeries and butcheries. Unfortunately, many wholesalers and retailers also used the opportunity to increase their prices substantially. This had the same effect as throwing petrol on a fire, the panic increased and spread like wildfire.

However, the same day the Government put important measures in place. Together with Sweden and Denmark a declaration of neutrality it issued. It mobilised and made it clear that Norway would use its limited but effective military capability to defend its neutrality. The Government also took a series of decisions that had implications for economic life. The next day, on August 2, the Bank of Norway was instructed to further increase its interest rate to 6 ½ %. Furthermore, on August 4, against the protest of its director the bank was forced by the Government to suspend the redemption of notes for gold (Keilhau, 1935, 505). Members of the government had read in the newspapers that the central banks of other neutral countries had made a similar decision.

At the same time, the government introduced a general power of attorney that prohibited export of certain food products, firewood, peat, fodder and other victuals. Fish and fish products, condensed milk, butter and cheese were exempted. For all products where export was prohibited, maximum prices were established at both
wholesale and retail. It was determined that grain and potatoes could no longer be used to produce alcoholic products. All these decisions and decrees were ratified by an extraordinary session of the Parliament on August 8, 1914.

To carry out these decisions the Government created the Provisioning Commission with the objective to secure the provision of victuals and other important products such as fuel. This commission was given a wide-ranging authority. It also cooperated closely with other state agencies and locally appointed provisioning committees. As the war dragged out several offices involved with the control and management of food stuffs and fuel were established. Their objective was to secure the supply of victuals and fuel that were necessary for the livelihood of the population. Loans from the Bank of Norway enabled the war commission, as the war continued, to make substantial purchases. The effect of this policy will be discussed later.

The Central powers realised very soon that the lack of provisions of victuals would be a serious issue in their relations with Norway. Already in the autumn of 1914, Germany started sending agents that purchased fish directly from Norwegian fishermen, bypassing the traditional trading channels for fish products. Fuglum (1978, 492) claims that German agents often secured the deals right under the noses of Norwegian wholesalers. This trade increased and consequently strongly drove the prices up to the disadvantage of domestic consumers.

In the autumn of 1915 the British Government declared that they could not accept that Norway was feeding its enemy and would take the necessary measures to prevent the growing trade that Norway carried on with Germany. One option was to stop UK export of fuel and supplies to the Norwegian fishing industry. First, they tried to halt this export by copying the German method to purchase directly from fishing boats. This method was not very effective due to the large number of fishermen and a lack of organisation of the market. Britain therefore started to buy fish in large quantities through Norwegian agents. As a consequence, prices rapidly increased and negatively affected the Norwegian home market.

A watershed occurred in Norwegian policies towards the belligerent countries, when on August 5, 1916, the Government was forced to enter into a secret deal, the Anglo-Norwegian Fishery Agreement with Great Britain (Øksendal and Værholm, 2010, 682). In this deal it promised to prohibit export of all fish products except canned fish, to other countries than Britain and its allies. However, it was permitted to grant a dispensation for 15% of the total fish production which could be sold to the Central powers. Britain promised to buy all fish that could not be sold at home at fixed maximum prices. Keilhau (1935, 510) claimed that this deal was fatal for Norway’s right to neutrality. It did not remain secret for long and brought the relations
with Germany to a breaking point. It created a violent exasperation on the side of the Central powers. This was the reason why Germany, let its submarines attack Norwegian ships along the coast of the Arctic Ocean, as retaliation.

According to Keilhau, the negative economic effects of the Fishery Agreement were wide reaching. It had as its primary objective to safeguard the income for fishermen. However, prices on essentials, such as fuels, and other operational costs increased sharply. The consequence was that the Norwegian fishing fleet faced sharply reduced profitability.

The agreement also had provisions that purchases should be financed by credit obtained in Norway and the Prime Minister insisted that the Bank of Norway, and not the private banking system should provide the necessary credits. The long-term effects were particularly noticeable for the state finances, as Britain gradually ended the agreement and the Government instead made the state as a guarantor. These consequences are thoroughly discussed by Varholm and Øksendal (2010) in their article on monetary policies in neutral Norway.

The powers that Parliament had granted the Government at the beginning of the war were gradually extended. Through the introduction of new legislation, it was given wide reaching power. State monopolies on import and sales of important goods were established. The state was given the power to prohibit production of specific products and the right to confiscate private storage of general stock and to expropriate private properties such as ships, machineries, electric power stations and other electrical installations. The Government was given the authority to prohibit ship-owners to sell ships to other countries and to lay up ships.

Through the same authority the Government created a Ministry of Provisions, a Directorate of Provisions and state monopolies on imports of fodder, coke, sugar and grain. In 1916 the government also secured its user right of the nation’s largest grain mill.

To secure the provision of coal the government also chartered ships on its own account, and it actively engaged itself in whaling to secure provision of fat. Another example, in 1918 the Parliament decided to acquire the majority of shares in a big power plant, to make sure that the construction, which was half finished and threatened to stop, continued. In the same year the state purchased a pyrite mine that had collapsed and made sure that production resumed. In 1917 a stricter price control was introduced for important commodities and rent on housing was regulated.

The British Government wanted to stop Norwegian export of pyrites to Germany, and to put pressure on the Norwegian authorities, it
introduced a ban on export of coal and coke to Norway.\(^5\) The consequence was that during the hard winter of 1917-1918 Norwegians suffered due to lack of heating materials.

It had been government policy to avoid rationing. Instead it had based its policy on maximum price regulations. However, during this hard winter the supply situation for coal, coax, firewood and necessary victuals became almost desperate. After massive demonstrations organized by trade unions against ‘dear times,’ the government changed its policy. Rationing was introduced for coal and coax and such victuals as grain, flour and bread, sugar and coffee, and later also tea. In addition, measures such as directing soldiers from their core duties to cutting fire wood were introduced, and in the summer of 1918 the government also introduced forced cultivation of grain. The rationing was managed through cards with coupons and turned out to be very effective. It was thoroughly prepared and Fuglum (1978, 501) claimed that it functioned efficiently. However, this kind of rationing did not last long and was for all practical purposes abolished at the beginning of 1919 (Grytten and Hodne, 1992, 80f).

All decisions and measures that had been introduced during the first days of August 1914 had the desired effect. People, who had good reason to be upset, were appeased and panic was prevented. However, these actions together with the measures that where introduced later during the war had another more fundamental effect. It extended the power of the government to such an extent that it abolished the liberal domestic market economy that Norway had before the war broke out. It is interesting to note that this was done by a liberal government. However, everything was done more or less ad hoc, under pressure of the situation, with a war that lasted and made things more difficult for every month that passed. There has been a discussion, e.g. Tønnesson (1979, 2f) and Hanisch et al. (1999, 51f), if this development during the war was a first step towards a stronger state.

It should also be mentioned that the government increased its diplomatic activity during the war and strengthened its cooperation with the other Scandinavian countries. The Scandinavian common policy of neutrality was marked by several protest notes to the Entente and the Central powers. The first, when corresponding notes were delivered to the envoys from Great Britain, France, Germany and Russia on November 13, 1914, protesting violation of international law. On December 18, the kings of Denmark, Norway and Sweden met to forcefully establish the common neutrality of the three countries.

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\(^5\) A Copper Deal had been signed on August 28th 2016. However, it was ambiguously worded and did not substantially reduce the export of copper and pyrites to Germany. In February 2017 Norway had to give in to British demands and ended up in the claws of the Britons (Andersen, 2017).
Most of decisions and measures that were introduced during the war years incurred increased government spending. Table 3 shows government spending in current and constant prices from the last budget year before the war 1913-1914 to 1919-1920, that is two years after the war ended. In current prices expenditures increased fourfold from 123,4 million kroner in 1913-1914 to 502.1 million in the last war year 1917-1918. Expenditure continued to grow after the war ended to 648.4 million in 1919-1920. However, high inflation was also a characteristic of WWI. Using the deflator developed by professor Ola H. Grytten (2015) it has been possible to compute expenditure in constant prices. In constant 1913-1914 prices expenditure did not increase much the first three war years, but in the final year it increased to 206,6 million, which is 67.3% more than in the pre-war year.

Table 3. Total Government Expenditure 1913–1920. 1000 Kroner

<table>
<thead>
<tr>
<th>Year</th>
<th>Current prices</th>
<th>Index</th>
<th>Deflator*</th>
<th>Constant prices</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1913/14</td>
<td>123 430</td>
<td>100.0</td>
<td>100.0%</td>
<td>123 430</td>
<td>100.0</td>
</tr>
<tr>
<td>1914/15</td>
<td>164 636</td>
<td>133.4</td>
<td>112.7%</td>
<td>146 083</td>
<td>118.4</td>
</tr>
<tr>
<td>1915/16</td>
<td>158 114</td>
<td>128.1</td>
<td>137.2%</td>
<td>115 243</td>
<td>93.4</td>
</tr>
<tr>
<td>1916/17</td>
<td>233 726</td>
<td>189.4</td>
<td>184.9%</td>
<td>126 407</td>
<td>102.4</td>
</tr>
<tr>
<td>1917/18</td>
<td>502 134</td>
<td>406.8</td>
<td>243.1%</td>
<td>206 555</td>
<td>167.3</td>
</tr>
<tr>
<td>1918/19</td>
<td>648 401</td>
<td>501.7</td>
<td>266.9%</td>
<td>232 041</td>
<td>188.0</td>
</tr>
<tr>
<td>1919/20</td>
<td>619 318</td>
<td>525.3</td>
<td>278.7%</td>
<td>232 652</td>
<td>188.5</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics (1948, Table 222) and Grytten (2015)

Since the government, against the advice of the university professors, did not increase taxes to pay in full for the increase in expenses, debt surged. This will be discussed later.

3. Military Preparedness and Costs

Norway like other small countries in Europe could not match the massive arms race of Britain and Germany before the declaration of war in 1914. However, Norway had managed in the years since 1905 to maintain the military capability it had built up in the years before it broke out of the union with Sweden and to a certain extent strengthen it (Melien, 1995). In 1914 it therefore had a small but effective navy suited for territorial defence, an elaborate system of coastal fortresses together with a small but well-organised army that could be called up on short notice. From 1911, the defence budget had also been considerably increased and in the budget year 1913-1914 it was 22.3% of total government expenditure. The country was therefore determined to defend its neutrality.

When the war broke out on July 28, 1914, the Norwegian government acted fast and decisively to protect its policy of neutrality. On
July 30 and 31, officers and essential crews were called up for the navy and the coastal fortresses. On August 1 there was full mobilization of conscripted personnel for the navy. The following day it called up the part of the army earmarked for coastal defence and put it on a state of alert. If necessary, a total force of almost 200 000 men could be deployed. Furthermore, the laying of controlled minefields at the inlets of important coastal towns on the south-west coast took place and was also a vital part of the defensive measures. These measures made it clear that a military attack on Norway would be met with strong military resistance. In addition, together with Denmark and Sweden, a declaration of neutrality was communicated to the belligerent countries.

Hobson et al. (2012, 28-29) discuss if the Norwegian mobilization might have appeared somewhat drastic but concluded that the situation called for the presence of a vigilant neutral guard. They also noted that there seems to have been a certain discrepancy among the Scandinavian countries as to the imperative of mustering an armed neutrality guard, high preparedness in Norway and less so in Denmark and Sweden, where the public opinion did not regard it as necessary.

The mobilisation of thousands of navy and army personnel and the cost of maintaining the navy and fortresses on full alert, throughout the years of war, implied large financial costs.

The first column in Table 4 shows that in current prices the defence budget increased almost five-fold from 27.5 million kroner in the budget year 1913-1914 to 135 million kroner in 1917-1918. Thereafter it dropped to 104 million in 1918-1919, and to 66 million in 1919-1920. During these years the inflation was exceptionally high. Using the previous mentioned deflator, the third column shows the defence expenditure in constant prices. From 1913-1914 to 1917-1918 the outlay doubled from 27.5 million to 55 million. Subsequently it dropped to 24 million in 1919-1920, which was less than the pre-war expenditure.

Table 4. Government Defence Expenditure 1913–1920. 1000 Kroner

<table>
<thead>
<tr>
<th>Year</th>
<th>Current prices</th>
<th>Index</th>
<th>Constant prices</th>
<th>Index*</th>
<th>% of total exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1913/14</td>
<td>27 490</td>
<td>100.0</td>
<td>27 490</td>
<td>100.0</td>
<td>22.3</td>
</tr>
<tr>
<td>1914/15</td>
<td>61 333</td>
<td>223.1</td>
<td>54 410</td>
<td>198.0</td>
<td>37.3</td>
</tr>
<tr>
<td>1915/16</td>
<td>65 362</td>
<td>237.8</td>
<td>47 644</td>
<td>173.3</td>
<td>41.3</td>
</tr>
<tr>
<td>1916/17</td>
<td>93 572</td>
<td>340.4</td>
<td>50 600</td>
<td>184.1</td>
<td>40.0</td>
</tr>
<tr>
<td>1917/18</td>
<td>134 662</td>
<td>489.9</td>
<td>55 396</td>
<td>201.5</td>
<td>26.8</td>
</tr>
<tr>
<td>1918/19</td>
<td>104 168</td>
<td>378.9</td>
<td>39 031</td>
<td>142.0</td>
<td>16.8</td>
</tr>
<tr>
<td>1919/20</td>
<td>65 655</td>
<td>238.8</td>
<td>23 554</td>
<td>85.7</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics (1948, Table 222)
Column 4 shows defence expenditure as a percentage of total expenditure from 1913-1914 to 1919-1920. In the last budget year, before the war broke out, defence expenditure was 22.3% of the total. This share increased to 37.3% in 1914-1915 and in 1915-1916 it was 41.3% and in 1916-1917 40%. In the last year of the war 1917-1918 the percentage dropped to 26.8. Two years after the war had ended defence expenditure was only 10% of total expenditure. ‘The war to end all wars’ had made military expenses redundant!

Although Norway was neutral, it is clear from this statistic, that the direct economic costs caused by the necessity to increase defence readiness and therefore its defence budget were substantial. The increase in defence spending became a considerable burden for the state finances.

4. Problems for Neutral Shipping

The shipping and foreign trade sector was the first to be affected by the war. The Norwegian merchant marine was the fourth largest in the world, with more than 3300 ships. These vessels were mostly engaged in transporting goods between foreign harbours and were therefore a potential valuable resource for the Entente. Naturally Germany would try to limit the use its enemies could have of the Norwegian fleet. It threatened to use its navy, if Norway did not stop shipping goods of war value to the Entente. On the other hand Great Britain tried to limit the Norwegian export to Germany, in particular of pyrites and fish products, by the treat of blockade.

Fuglum (1978, 483) claims that the situation created was one of the most intricate and disputed areas of international law. How could neutral countries carry out trade and shipping during war times? An international conference in London in 1909 had given detailed rules for contraband. According to these rules, transport of goods such as weapons and ammunition could be seized from neutral ships if they were destined for the enemy. The right to seizure was limited for goods such as grain, clothing, conveyances and other goods that could be important for military use, but which primarily were intended for civilian use. The London declaration was not formally ratified, because the British parliament refused. However, the belligerent powers at the beginning of the war said that they would respect it. When the war became one of exhaustion international law was pushed aside. Like the other neutral countries, Norway had to find its way as best it could in a situation “where might is right” (ibid., 484).

In the first years of the war, Norway, as the other neutrals, were obliged to and tried to follow international neutrality rules. However, the country was dependent on imports, exports, and its shipping, and was therefore squeezed between the belligerent nations. Britain, as mentioned, wanted to stop some of its export to Germany, and for a
while it put the screw on by stopping its export of coal and coke. Germany on the other hand claimed rightly that Norway was not capable of upholding a consequent and impartial neutrality, and therefore started to use its navy as a force. As the war dragged out and more and more Norwegian ships were sunk by German submarines, Norway as a consequence, and because of its economic dependency on Great Britain, moved gradually into a position as her ‘neutral ally’ (Riste, 1965, 123) and (Riste, 2005, 109).

The trade war at sea took the form of retribution and went through different phases. It started in the autumn of 1914. Ships from neutral nations were stopped and inspected by navy vessels from both the Entente and the Central powers. A few Norwegian ships were sunk by German ships or they hit mines. Both Britain and Germany had started early minelaying of what they called strategic areas. Very often, these mines were lost and drifted in the sea. Therefore, they were a threat to shipping. In the second half of 1915, the war at sea escalated. Germany started to use its submarines. First in a limited and gentleman like manner. Before a ship was sunk, the crew was given the opportunity to get into the lifeboats. Britain retaliated and almost closed the North Sea. Germany reacted and declared the sea around the British Isles and Ireland as a war zone. This in itself had a limited effect with the weapons that at the time were considered acceptable to use. As time went by it became clear that the outcome of the war would not be decided in a battle or two. The stand-still in the trenches had as a consequence that the war moved from a conventional war to an economic war. The warfare escalated, and the views changed on what kind of weapons could be used, and how they could be used.

5. The Unrestricted Submarine War

At the end of January 1917, Germany published a proclamation that declared a total blockade of its enemies. All shipping in the areas around the British Isles, France and Italy would be considered an enemy and attacked with all available weapons. Bjarne Søndergaard Bendtsen (2012, 330) claims that to be fair it was the British, who introduced the blockade by imposing restriction on trade already in August 1914; restrictions which “began the erosion of the maritime laws of war.”

There was no doubt that Germany, because of its proclamation, would unleash its more than 130 submarines on the merchant fleets belonging to allied and neutral nations. It brought a new ferocity to the war on the seas. The German navy command claimed that it could sink 600 000 tons a month and that this would force the allied powers to make peace before the next winter. And in the first months it succeeded in sinking more than its target and it brought Britain on its lasts leg.
In deciding on an unrestricted submarine warfare, the German Government assumed, that the destruction of allied and neutral shipping would render Great Britain unable to feed her people, and at the same time perform her function in the Entente (Foyle, 1924, v). Foyle shows how this gamble nearly succeeded. One of the German objectives was also to scare all neutral shipping away from sailing to and from allied territorial waters. It was partially successful, with a sharp decline in Danish, Dutch and Swedish ships calling on British harbours (Fuglum, 1978, 496). This was not the case for Norwegian shipping, with the consequence that it felt the full force of the submarine attacks. Keilhau (1935, 504f) claims that Norwegian ship-owners risked sailing because in August 1914 a mutual war insurance had been established for all ships and their cargo.

In the first two and a half years of the war were the Norwegian losses relatively moderate with 270 ships and a gross tonnage of 370 000. However, in the first half of 1917 300 ships with a total tonnage of 460 000 were lost. Consequently, 439 sailors perished. For the allied countries, it was a catastrophic period, and the storages of victuals in Britain, but also in the neutral Norway, were at the time extremely low. The importance of the neutrals merchant-fleets in general and the Norwegian in particular, for bringing food and other victuals to Britain during the war, should therefore not be underestimated.

Better weapons against the submarines were invented, produced and taken into use. Deepwater bombs and listening devices were used by the allies. The use of convoys particularly from North America to the British Isles also reduced heavy losses at sea. By the end of 1917, it became clear that although still a formidable threat, submarines could not determine the outcome of the war.

The total impact of submarine war on Norwegian shipping is shown in Table 5 and 6. Table 5 shows the development of the merchant fleet from 1914 to 1919. The total number of vessels increased slightly from 3325 until 3495 in the first two war years. However, from 1916 to 1917 the number of vessels declined slightly. In tonnage, there was a slight increase the first year, but from 1915 to 1918, the tonnage declined by about 740 000 tons or 28%. These numbers provide an incomplete picture of the effect of the submarine war on Norwegian shipping. Because of high earnings during the war years, Norwegian ship-owners were able to build new ships in Norway and in other countries. Furthermore, they purchased second-hand ships from foreign ship-owners who were unwilling to take the high risk of engaging in sea-transport during war times.
Table 5. Merchant Fleet. Number of Vessels and Tonnage 1914–1919.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of vessels</th>
<th>Gross 1000 tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>3,325</td>
<td>2,648</td>
</tr>
<tr>
<td>1915</td>
<td>3,460</td>
<td>2,662</td>
</tr>
<tr>
<td>1916</td>
<td>3,495</td>
<td>2,629</td>
</tr>
<tr>
<td>1917</td>
<td>3,417</td>
<td>2,059</td>
</tr>
<tr>
<td>1918</td>
<td>3,474</td>
<td>1,892</td>
</tr>
<tr>
<td>1919</td>
<td>3,665</td>
<td>2,058</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics (1948, Table 126)

The true picture of the war losses is therefore shown in Table 6. This Table displays the merchant vessels and gross tonnage lost during the war years. A total of 889 vessels with a tonnage of 1.3 million were wrecked.

Table 6. War Loss – Number of Vessels and Tonnage 1914–1918.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of vessels</th>
<th>Gross 1000 tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>1915</td>
<td>69</td>
<td>92</td>
</tr>
<tr>
<td>1916</td>
<td>195</td>
<td>270</td>
</tr>
<tr>
<td>1917</td>
<td>423</td>
<td>671</td>
</tr>
<tr>
<td>1918</td>
<td>124</td>
<td>189</td>
</tr>
<tr>
<td>Unspecified year</td>
<td>69</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>889</td>
<td>1,296</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics (1948, Table 131)

This Table also demonstrates that there was a sharp increase in both the number of vessels and tonnage lost from 1914 until 1917. The last year of the war shows a steep decline in vessels lost and tonnage. This was due to British war ships sinking a substantial part of the German submarine fleet during the second half of 1917. Norway’s total loss was 27% of the number of vessels in 1914 and 49.3% of the tonnage of the pre-war fleet. This was a greater percentage loss than was suffered by any other belligerent or neutral countries (Foyle, 1924, 468) and (Derry, 1973, 284). From having the fourth largest merchant marine in 1914 the Norwegian fleet was reduced to the sixth largest in 1920, due to war losses.

There can be no doubt that the Norwegian merchant marine rendered great services to Great Britain and the Entente. Without these

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6 The numbers vary. Foyle (1924, 469, Table iv) claims the following percentage losses: Norway 50.3, Greece 41.6, France 32.2, Italy 27.2, Denmark 24.9, Spain 18.0, Sweden 12.8, British Empire 14.6. Keilhau (1928, 360 and 1935, 516) claims that Norway lost 49.3%, Italy 46.9, France 39.2, and Britain 37.6.
services the people of these countries would have suffered. However, this contribution cost the Norwegian sailors and their families dearly. It is known that 2100 Norwegian seamen were lost at sea during the war and thousands of seamen suffered from their traumatic war experiences.

6. Monetary and Fiscal Policies

Prior to the outbreak of the First World War the Norwegian economy was characterized by domestic economic liberalism. The state should provide a framework for private businesses and set the market conditions. It should also carry out its economic affairs like a private household. The budget should, as a rule, be balanced. In good years it could have a surplus. This surplus should be kept for less prosperous years. It was also an important task for the state to make sure that Norway had a credible and stable monetary system.

From 1905 until the outbreak of WW1 the gold standard monetary system and the Scandinavian Monetary Union SMU from 1873, with fixed exchange rates between Denmark, Norway and Sweden, had functioned well. This period has also been called “the good old days” of the monetary system (Petersen, 1957, 42). To secure such a system the Bank of Norway was obliged to redeem bank notes in a peremptory quantity of gold. The Gold Standard was, Hanisch et al. (1999, 19), an example of the principle of limited power of the state and represented an institutional arrangement that is characteristic for economic liberalism. When the three Nordic countries suspended gold convertibility, the consequence was dissolution of the currency union and the end of a liberal economic system.

As mentioned the Bank of Norway was forced to suspend redemption of gold on August 2, 1914. This was confirmed by the Parliament on August 18. The Government was also given the power to relinquish its claim that the Bank of Norway had to pay an extra fee if money supply exceeded what was stated in its statutes. Consequently, there was no guarantee against the increasing issuing of money that took place during the war years. Through legislation the Government in addition increased in 1916 by 50% the volume of bank

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7 Erling Helmer Petersen (1906-1992) was professor of economics at the Norwegian School of Economics in Bergen from 1941-1952 and at University of Oslo from 1953-1976. From 1953 until 1973 he was a member of Parliament representing the Conservative Party.

8 In an article entitled “Money Talks”, Gjermund F. Rongved (2012) gives short introduction to the main features and historical development of the SMU prior to WW I and the monetary problems that occurred after the gold convertibility was suspended in August 1914. A deeper understanding of the benefits and costs of the SMU can be found in his article The Gold War (Rongved, 2017).
notes the Bank could issue, given its stock of gold. This further increased the issue of money and had detrimental effect on inflation.

The previously discussed Anglo-Norwegian Fishery Agreement required that credit could be arranged in Norway. The Prime Minister decided that a loan to the British government should be granted by the Bank of Norway. This credit has been criticized by many historians and economists but most severely by Keilhau (1927, 310; 1935, 508; 1952, 156). He claims that the Prime Minister coerced the Bank of Norway to open a cash credit to the agents buying fish. Furthermore, he added that the Prime Minister had no concept of neither the monetary consequences nor the effects it had on the relation between the government and the bank. This decision also forced the bank into transactions that were beyond its duties in normal times and the problems it was obliged to solve as a monetary institution. For this reason it lost its ability to slow down the ongoing inflation. Værholm and Øksendal (2010, 679), claim that the Bank of Norway throughout the war kept the bank rate within the pre-war gold standard range 4.5-6.5%. Given the inflation level the result was highly negative interest rates, reaching its lowest level in 1918 at more than minus 30%.

By December 1918 the Bank of Norway was issuing twice the volume of bank notes compared to the maximum volume stated in its statutes. The inflation continued also in the first years following armistice. If the issue of bank notes, the supply of money, in July 1913—June 1914 is set to 100 it reached 443 in December 1920.

Gjermund Forfang Rongved has addressed the problems and effects of the Fishery Agreement in light of a broader analysis, in his doctoral degree from 2014. He claims that this credit scheme was not an exceptional event. Comparisons revealed that several of the central banks in the European neutral countries also financed the belligerents. To avoid severe national problems these banks chose to set aside their conventional policy objectives and came to the emergency assistance of their governments. And they were aware of the negative effects: “Rather than depicting Bank of Norway as abandoning its statutory responsibility under national circumstances, the incident must be seen as the bank assuming national responsibility in a difficult situation. If the effects are considered, these actions may not have been in accordance with monetary policy—but they were not intended to be. It was instead a manifestation that the fundamentals of what constituted good central bank policy had changed radically when the livelihood and survival of the nation were at stake” (Rongved, 2014, 56).

Both Nicolai Rygg (1954), who became Executive director of the Bank of Norway from 1920 to 1946 and Gunnar Jahn (1966), who followed him as director from 1946 until 1954, and who to a large extent supported Keilhau’s views, claimed that the Bank of Norway might have been unaware of the inflationary effect of the Fishery agreement. Rongved (2014, 78) disagreed and claimed that the bank was aware of
the negative effects but that it “had to make central bank policy subordinate to national policies and national considerations”. Furthermore, he stressed that sound central banking under normal circumstances would have to be abandoned in favour of national responsibility during a crisis: “The First World War was not the time for a rational monetary policy, it was time for a rational central bank policy.”

Government interventions were extensive, and they were controversial. Some politician on the political right claimed that these interventions represented socialism in disguise. The government at the time saw it as pragmatic solutions to the extraordinary problems created by the emergency of war. The extension of the power of the government and the state was intended to be extraordinary and temporary. The fact that many of these measures became permanent was not foreseen at the time.

The government declared early, after the break out of war, that it had the intention of financing extraordinary expenditures caused by the war, with increased taxation. However, increases in expenditure could not be met by the tax increases the government introduced on high war earnings. This led to a rapid increase in the state debt from 357 million kroner in 1914 to 737 million in 1918 and 1130 million in 1920. This debt was partly financed by loans from the central bank. The result was an increase in the money supply and it fuelled price inflation.

Hanisch et al. (1999, 58) claims that the causes of the strong increase in the price level and what could be done with it was important issues at the time. One explanation was that the increase in the price level resulted from the extraordinary conditions the war created. Increased demand and lower production in many countries forced prices up. Several politicians were of the opinion that the problem would take care of itself, and that the price level would revert to normal when the war ended. Economists at the University of Oslo, Jæger (1916a; 1916b) and Aarum (1916), questioned this view. In their opinion, the primary cause of the increase in the price level was the extraordinary increase in the money supply. They recommended a tighter finance policy, a tighter monetary policy and above all a higher interest rate. However, they failed with their arguments. The nominal interest rate was increased, but the real interest rate was negative all through the war.

In retrospect, it is easy to criticize the actions taken and not taken by the government during the war and in the years after. Keilhau (1927; 1828; 1935; 1952), gives a devastating critique of the monetary and fiscal policies of the Government of Prime Minister Gunnar

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9 Central Bureau of Statistics (1949, Table 225).
10 This was also the view of the Bank of Norway, the Danish National Bank and to a certain extent the Swedish National Bank.
Knudsen and the Bank of Norway, which in his opinion did not meet their national duties. One quote is enough: “When the Gunnar Knudsen cabinet, who had been in charge of the public household during all the war years, handed in its resignation after having lost a vote in the Parliament on June 17th, 1920, it was thus an extremely bad financial heritage it left behind.” (Keilhau, 1935, 505).

Hanisch et al. (1999, 62) writes that the economic policy could, as recommended by the university economists, have been different on many accounts. The government’s financial policy could have been more orderly and better arranged. The financial and monetary policy could have been considerably tighter. Import restrictions could have been removed more gradually when the war ended, as happened in some other countries. If the government had complied with the traditional rules of the game in the monetary and fiscal policy the result would have been better. On the other hand, Tønneson (1979) contends that it should be emphasized that the Norwegian central administration was relatively new and inexperienced and that it during the war was faced with new problems of a magnitude that it simply lacked the education and experience to handle in a satisfactory manner. The same mistakes were also made in other countries although not to such a large extent.

One important question should be asked: were the policies carried out by the Norwegian government and the Bank of Norway during the war different from the policies that governments and central banks in other neutral countries carried out? Rognved in his article The Gold War from 2017 discusses this question and carries out a comparison between the three Scandinavian countries, Norway, Denmark and Sweden. In his investigation, he shows that the three countries monetary growth (in notes in circulation) followed each other rather closely until the beginning of 1916 (Rognved, 2017, 248-249). But that Norway, in the first half of 1916, had a sharp increase and that from this time onwards until the end of the war, and actually until 1920, had a growth that was substantially higher than the other Scandinavian countries. Until Norway’s sharp increase in 1916 the Danish growth was marginally higher than the Swedish. In the beginning of 1916 Denmark also had a sharp increase in its growth but not as sharp as Norway. The Swedish growth was relatively moderate. From the summer of 1916 the Swedish and the Danish growth converged. They were equal in the beginning of 1917, before the Swedish growth outgrew the Danish until the beginning of 1920. This indicates that Denmark was most reluctant to increase the monetary supply during the war. The Norwegian index number was above 400 in December 1918, Sweden was above 360 and Denmark just above 300. However, the Danish currency paradoxically enough had at the same time the lowest value in the market. Furthermore, Denmark had not tried actively to use the interest rate to correct this. The rate was
held at 5% during the greater part of the war when both Norway and Sweden to some extent, although not very effectively, used the interest rate. An important consequence was that the economy did not function as expected by economists at that time, and as they also later expected. It looks like it was very little connection between relations such as monetary expansion, monetary value, price level, and interest rates.

Furthermore, Rognved (2017, 254-255) claims that the Bank of Norway and the Danish National Bank had similar thoughts and policies but that the Swedish National Bank thought differently and tried to follow a different policy. It can be claimed that the Norwegian and Danish central banks followed the same monetary policy but that the results were different.

7. Destruction of Production Capacity

Norway’s exit from the union with Sweden in 1905 marked a period of exceptionally high economic growth. Regrettably, these years of growth ended in the third year of the war.

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Current prices</th>
<th>GDP Constant prices$^{11}$</th>
<th>Gross capital formation$^{12}$ Current prices</th>
<th>Gross capital formation. Constant prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914</td>
<td>1919</td>
<td>1683</td>
<td>368</td>
<td>324</td>
</tr>
<tr>
<td>1915</td>
<td>2594</td>
<td>1757</td>
<td>487</td>
<td>351</td>
</tr>
<tr>
<td>1916</td>
<td>3871</td>
<td>1825</td>
<td>825</td>
<td>399</td>
</tr>
<tr>
<td>1917</td>
<td>4489</td>
<td>1659</td>
<td>1168</td>
<td>361</td>
</tr>
<tr>
<td>1918</td>
<td>5048</td>
<td>1592</td>
<td>1173</td>
<td>325</td>
</tr>
<tr>
<td>1919</td>
<td>6195</td>
<td>1865</td>
<td>1522</td>
<td>393</td>
</tr>
<tr>
<td>1920</td>
<td>7500</td>
<td>1987</td>
<td>2014</td>
<td>439</td>
</tr>
<tr>
<td>1921</td>
<td>5448</td>
<td>1795</td>
<td>1209</td>
<td>301</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics (1966, Table A and C)

From the first column of Table 7 it follows that GDP in current prices rose sharply from 1919 million kroner in 1914 until 5048 million in 1918. This increase was, however, solely caused by an increase in the price level. Measured in constant 1910 prices, column two, GDP rose from 1683 million in 1914 to 1825 million in 1916. In the next two years, it declined and in 1918 it had dropped to 1592 million, which is 5.4% lower than before the war.

Investment measured by gross fixed capital formation in private and public enterprises shows the same development. In current prices, column 3, it rose from 368 million kroner in 1914 to 1173 million in

$^{11}$ Constant 1910 prices.

$^{12}$ Gross fixed capital formation in private and public enterprises.
1918. However, in constant prices gross investment was the same in 1918 as in 1914.\textsuperscript{13}

In the first two years of the war, Norwegian manufacturing industries and shipping did well from an economic point of view. Earnings were high because it was a sellers’ market. In 1915 freight charges averaged three times the pre-war rates, by 1918 there were some hazardous trades where they had risen twenty times (Derry, 1973, 272). Shares in shipping increased, by as much as 500%. Shipbuilding also enjoyed growth. Businesses that supplied industries that geared their industries to the production of weapons and ammunitions, had very good earnings. All the belligerent countries were in dire need of Norwegian products. However, from 1917 the situation became more difficult. Scarcity of coal and raw materials and the loss of the German market, through increased British pressures, together with the unrestricted submarine war led to a decline in production.

Professor Erling Petersen (1957, 121f) attempted to analyse the consequences of the war on production, imports, exports and investments. He makes it clear that although the nominal value of imports tripled from 1913 to 1917, this was solely an effect of rising prices. In fact, the volume of imports was reduced. The export numbers had similar characteristics. It is the increase in prices that are reflected in the numbers. The export volume increased in the first years of the war, but for all the war years it declined. An impoverishment of the Norwegian economy took place, but it was camouflaged by a sharp increase in nominal values. This optical illusion of high value numbers, Petersen continues, is one of the great problems of war. Furthermore, he claims that there has not yet been carried out a thorough calculation of the real impoverishments in different sectors of the economy. Although the Norwegian people were not hit as bad as people in the belligerent countries in feeling this impoverishment of the war, it was bad enough. Production continued during the war, but it was not possible to repair the wear and tear of manufacturing equipment at the pre-war rate. This situation was amplified in industries that produced at full capacity. In these industries there was a pent-up demand to repair and replace worn out machinery. Lack of imports made this impossible.

The development of gross investment, measured as gross fixed capital formation in current and constant prices, have been shown above. High investment levels were obscured by price level increases. In current prices, gross investment in 1918 was on the same level as in 1914. This means that the net investment, that is the increase in real capital, must have been insignificant in some industries. If the loss in

\textsuperscript{13} The gross capital formation is a poor indicator of investments, since what count is net capital formation, especially in times of war. Unfortunately, such data does not exist. However, professor Erling Pettersen (see below) has tried to tackle this problem.
shipping is considered, it might even have been negative. Investments were also made in crisis production of surrogate products that disappeared as soon as the real products were reintroduced. Repairs and replacement of machinery were made using substitutes that did not work well, and which were upgraded in the immediate aftermath of the war.

Norway was at the outbreak of the war still one of the poorest countries in Western Europe. Its GDP Per Capita was still only 73.5% of the average, as computed from Table 1. Only Finland with 58.2% was poorer and Italy with 73.9% was almost as poor as Norway.

How bad was the impact of the war on economic development in Norway compared with the other Scandinavian countries, the other neutrals and with the belligerents among the West European countries? If changes of GDP Per Capita in the years 1914 to 1918 can be used as a measure of the impact Table 2 can be studied. The negative impact of the war was less in Norway than in Denmark and Sweden. During the war years 1914-1918 GDP Per Capita was reduced by 9.6% in Norway compared to 15.8% in Denmark and 17.2% in Sweden. The negative impact in Norway was also less than in the neutrals, Netherlands with 13.3% and Switzerland with 10.3%.

It is also clear from this Table that the two countries that suffered most from destruction by invading armies on their territories, were Belgium with a reduction in GDP Per Capita of 27.1% and France with a reduction of 26.0%. Finland has in these years the greatest reduction in GDP Per Capita with 31.5%. This is, however, due to the economic problems caused by the dissolution of the personal union with Russia after the revolution in 1917, and the civil war that ravage the southern part of the country in 1918.

What is surprising with this GDP Per Capita statistic is that two of the main contenders in the war got out of it with small changes, Germany with a 2.5% reduction and Great Britain with a 10.8% increase.

The average decline in GDP Per Capita for all the 12 West European countries was 2.6%.

8. Social Cost of Neutrality

Scarcity of commodities together with an expansive monetary policy led to a sharp increase in prices from 1915 and onwards. The maximum prices introduced to stop the panic led to a relatively modest increase in the wholesale price index in the first year. But when it was removed in the autumn of 1914 prices soared. The index increased by 38% in 1915, and by 46% in both 1916 and 1917. In the final war year, the price index showed almost no increase.\footnote{Central Bureau of Statistics (1948, Table 179).}
This price increase was extremely uneven. Some prices, for example on important victuals, surged when others only had a slight increase. In some cases, prices even dropped. Consequently, Petersen (1957, 125) contends that a dislocation occurred “in the interior economic structure.”

As prices increased unevenly so did incomes. Wage-earners and people on pensions had only a modest increase in income, particularly in the early years of the war. The cost of living almost tripled during the war. This compared to a substantially smaller increase in wages for earners. Consequently, an average wage earner had to reduce consumption, and many had a considerable decline in living standard. An example; the wages in the engineering industries rose from April 1913 to the same month in 1916 with only 10%. The cost of living index rose with almost 40% from July 1914 until March 1916. It is therefore clear that many low-income families experienced a sharp decline in their purchasing power.

The profit opportunities for business people were generally favourable during the war and particularly the first two years. Some high-income earners experienced previously unseen increases in wealth. A trading boom caused speculations on the stock exchange. Holders of shipping shares and owners of export businesses made gains one day and losses the next, often without any consideration of the seamen that manned the fleet and risked their lives.

As mentioned 2100 Norwegian seamen were lost at sea during the war. The number of seamen that had short or long-term negative health effects from the physical and psychological stress of being torpedoed, or through the threat of being torpedoed, has unfortunately not been studied. However, it is clear that this number was many times the number that perished. Many seamen that suffered such effects could be found as alcoholics, hobos and social cases in many ports in the 1920s and 1930s. At that time these men’s miserable conditions were not connected with their suffering during the war. In addition, hundreds of widows and thousands of children lost their bread winner with great social and economic consequences.

Bjørne Søndergaard Bendtsen (2012, 337) has carried out a survey of the experience of Scandinavian seamen during first world war, as they were depicted in memoirs and literature. He draws attention to the theatre play Vår ære og magt (Our Honour and Our Power) from 1935 by Nordahl Grieg. This play focus on the hardship suffered by

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15 The situation after WWII has been a little better, although it took some years before these traumatic experiences were taken seriously.
16 Nordahl Grieg (1902-1943) was in his lifetime Norway’s most pronounced poet. He was a journalist, a dramatist, a writer of novels, an essayist and a lyric poet. He was controversial during the 1930’s because of his support for the Soviet Union. During WWII he fought against the German occupation from London.
the Norwegian seamen and their families during the war effectively contrasted to despicable war profiteers earning millions in shipping.

It has been said that the war gave very large earnings for the few, and shortages and high prices for the many. This situation resulted in escalating tension between different social classes. The year 1917 saw the greatest protests in Norwegian history. Demonstrations against the time of dearth with increasing demand for political action, took place in many cities and towns. In June more than 300,000 took to the streets to demonstrate against lack of victuals, high prices and lack of money to pay for essentials. In the capital Kristiania more than 40,000 demonstrators took part (Haug, 2016, 11).

The labour leader Olav A. Scheflo formulated it in these words; “the upper class is enjoying a golden age without parallel in the nation’s history.” Hanisch et al. (1999, 53) explained that in a difficult economic situation where scarcity of important commodities resulted in dearth times and considerable social unrest: “A new credit-based share boom where the champagne floated in abundance did not quell the social opposition.”

The war years therefore saw fundamental changes in the national income distribution. Before the war public servants, employed by the state, counties or municipalities, had above average incomes, and much higher incomes than people working in manufacturing industries. After the war ended, the picture had turned around and public servants found that they had below average incomes. It should also be mentioned that some groups, such as workers in agriculture and loggers in forestry, finally got a relative decent income.

The cumulative effect was that the income distribution became extremely uneven. The ‘nouveau riches’ liked to show off their new status with conspicuous consumption and it resulted in and increased demand for luxury goods. The economic historian professor Einar Lie (2012, 38) dryly comments: “There was a great deal of action [from the authorities], but it did not succeed in securing the good times and the big incomes for a wider range of social classes.”

The Labour party, who had a breakthrough in the election of 1912, grew stronger during the war years and became revolutionary in their search for a solution to the social problems created by the war.

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17 Here quoted from Thomas K. Derry (1973, 266).

using his pen and voice. As a correspondent on a British bomber raid against Berlin in December 1943 he was shot down.
9. From War to Peace

When the war ended with the armistice in November 1918, the Norwegian business community adopted a waiting attitude. The war years had been suffocating. In almost all industries production had in current prices reached levels that no one thought would be possible. As mentioned above, in current prices was GDP in 1918 two and a half times the value in 1914. It was the consequences of the war that had resulted in these extreme outcomes. Therefore, it was natural to think that these inflated amounts would collapse when their causes were removed. This awaiting attitude was reflected in the prices on the stock exchange. Share prices decreased noticeable in the first months after the armistice. Business leaders had a glum outlook and expected a decline in profit. Petersen (1957, 129) wrote that the economic effects of a war did not ebb away when hostilities were terminated. It soon became clear that there was a tremendous need for commodities particularly in Europe. All available commodities could be sold at profitable prices. In 1919, the demand in Norway was still strong and prices soared above war levels. GDP in current prices (Table 7) increased with 48.6% from 5048 million kroner in 1918 to 7500 million in 1920. This is almost four times more than it was in 1914 (Central Bureau of Statistics, 1966, 150-151). In constant prices the increase was 24.8%.

The Business community anticipated that the surplus demand would last for a prolonged period. The price increase created splendid possibilities for profit. Since there is a lag between purchasing and sale of commodities, or between the purchase of raw materials and payment of salaries and the sale of the products, business stand to gain during a period of rapid price increase. However, increasing prices leads to a re-evaluation of all commodities and capital goods in society. Equity owners became wealthier measured in Norwegian kroner, but at international prices the wealth effect is ambiguous as the value in Norwegian kroner decreased.

Computed in value terms the years 1919 and 1920 showed a continuous upswing. The profits were good and almost all available labour found work, and unemployment was at a low level. The real economic situation was, however, not so good. Unquestionably, the production in manufacturing industries increased during these two years. But, despite this fact, total production of manufacturing products did not reach the production level of the year 1916, and it was just marginally greater than 1913. The increase in this seven-year period had been minimal in real terms. Beyond manufacturing industries, the result was better and the gross domestic product in constant prices increased from 1592 million kroner in 1918 to 1987 million in 1920, representing more than a 20% increase.

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Economic activity was particularly strong in foreign trade. The partial blockade caused by the submarine war had created a strong demand for imported commodities. Due to good earnings in shipping, and high prices for Norwegian export commodities, Norway held a large foreign reserve at the end of the war. A potential increase in imports of commodities or decrease in exports could therefore be financed. The supply situation world-wide was favourable for Norway. Large quantities of commodities were in storage in foreign harbours. These commodities could not be shipped during the war, but were now on their way to Europe. Norway had the means to acquire a considerable part of it. In 1919 the import in current prices was 2600 million kroner. The record level was achieved in 1920 when the import reached 3050 million. It took another twenty-seven years before the import again reached this level (Petersen, 1957, 131). The changes in exports were not so pronounced. In 1919 exports were lower than in 1917 and substantially lower than in 1916. Even in 1920, when exports were 1250 million kroner it was not larger than in 1916. This resulted in a tremendous growth in the import surplus.

The upswing in the years 1918-20 measured by changes in GDP Per Capita (Table 2). Norway had a growth rate of 21.6%, compared with 15.4% in Denmark and 11.1% in Sweden. The two other neutrals had also considerable growth these two years, Netherlands with 28.5% and Switzerland with 13.6%. Here it is also interesting to note that the three countries that were most devasted by war also had the highest growth in these years, Belgium with 38.5% and France and Finland with 34.7%.

During the war, Norway had substantially increased its foreign exchange reserve. However, Petersen claimed that this reserve vanished “like dew before the sun” during the first post war years, due to lack of regulation of the foreign exchange market (ibid). This resulted in a sharp increase in the foreign exchange rates in Norwegian kroner. The US dollar exchange rate was kroner 3.73 in 1914, kroner 2.79 in 1916, kroner 3.64 in 1918 and increased to kroner 7.49 in 1920. The British £ was kroner 18.17 in 1914, kroner 17.12 in 1916, kroner 16.97 in 1918 and increased to kroner 23.76 in 1920. The increase continued for both dollar and pound in the following years. This created a foreign exchange problem that continued to play a dominant role throughout the 1920’s and 1930’s.

18 Not only the Norwegian but also the other Scandinavian currencies were among the most demanded/highest priced during most parts of the war. This despite the considerable monetary expansion.
10. The Post War Collapse

The post war boom, with high growth rates, that many countries experienced after the war, ended around 1920. The backlash was strong and hit most countries world-wide. Prices in many commodity markets tumbled dramatically within a few months, some by as much as 50% or more. In many factories production was no longer profitable. The results were production cuts or in many cases bankruptcies and closure. Unemployment increased sharply with social unrest as a result.

In Norway the breakdown was somewhat delayed. When prices worldwide dropped in the first half of 1920 they continued to rise in Norway. The wholesale index reached its peak in September 1920 (Petersen, 1957, 198f). It was then 425 when 1913 is set at 100. Special circumstances made the collapse particularly strong when it hit with full force. First the shipping industry was exceptionally hard hit. Freight rates fell sharply. Laid up ships, and bankruptcies followed. Another weak point was the processing industries paper and pulp. The forestry owners increased production when prices on timber were high. When the prices on final products dropped the factories were unable to pay for the timber they had contracted. Therefore, factories reduced production or closed. Finally, in 1920, the workers’ union and the employers’ organisation failed to agree on wages. The court of wage arbitration, which had been introduced during the war, decided a relatively substantial wage increase at the top of the boom. The wage earners should be compensated for the previous price increases.

In the following months, product prices dropped sharply, and industry owners could not pay the new wages, the consequence was a reduction in production and a sharp increase in closures. The production index dropped by almost 30% in 1921. In current GDP declined sharply from 7500 million kroner to 5448 million in 1921. Although the decrease in constant prices was less, its psychological impact was to deepen the crisis. The number of bankruptcies rose from less than 200 in 1919 to about 1000 in 1921. Thereafter it declined to about 800 in 1924 but took a turn for the worse and reached a record level of almost 1300 in 1926. Unemployment rate was 2.3%, among union members in September 1920, and reached 17.6% in September 1921. In December it had reached 23%. This serious unemployment problem became a nightmare that weighed heavily on the Norwegian economy during the interwar period.

The backlash after the post war boom in the West European countries, measured by changes in GDP Per Capita is indicated in Table 2. All countries had low or negative growth in 1920-21. The three Scandinavian countries had all negative growth, Norway with -9.4%, Denmark with -4.2% and Sweden with -4.6%. The countries that had
experienced highest economic growth in the two years after the war were also hit hard by the collapse, with low or negative growth rates, Belgium with 2.4%, Finland with 2.1% and France with -4.7%.

The collapse in Norway was amplified by the policy of the new director of the Bank of Norway. Schooled in the natural law tradition of Hugo Grotius and Samuel Pufendorf and having a strong belief in the liberal economy, Nicolai Rygg firmly believed that it was the duty of the bank and the government to bring everything back to normal and to reintroduce the gold standard. When he started in 1920 he had wide support from the economists at the University of Oslo, but this support soon turned into a heavy resistance. However, Rygg could not be turned around. He continued his policies and the gold standard was again adopted in 1928, with what some would claim had a disastrous effect on the Norwegian economy in the interwar period.

11. Conclusion

Norway had prior to WWI enjoyed a decade of sound economic expansion. At the outbreak of the war a period of economic turmoil commenced. To defend its neutrality the country mobilized its navy, coastal fortresses and its armed forces were earmarked for coastal defence. This represented a significant financial burden.

The war had negative effects on production, import, export and investments. Shipping and the foreign trade sector were the first to be impacted. The German submarine war resulted in a loss of almost 50% of the pre-war fleet. The entire economy and its industrial structure were impoverished. The social costs of war were considerable. 2100 seamen died, thousands were wounded physically and mentally, with tremendous suffering for their families. The war created a society that was riddled with an uneven distribution of income and wealth.

The post-war boom lasted longer in Norway than in most other Western European countries. In turn, bankruptcies reaching previously unseen levels and an unemployment rate that rocketed tenfold to 23%, followed in the wake of the post-war collapse. The crisis was further amplified by the policy to reintroduce the Gold Standard.

In retrospect, it is easy to criticize the financial and monetary actions taken and not taken by the government during the war and its aftermath. Several economists and economic historians have given negative verdicts, but recent studies have moderated this view.

In conclusion the First World War had a tremendous effect on Norwegian society and the political and economic development in the 1920s and 1930s.
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