

Recessions of 1910-1919: the recession triggered by World War I

Recession | PEAK: 1912 - TROUGH: 1918.

The Portuguese Republic inherited fiscal imbalances from the monarchy, which were further exacerbated by political and social instability. In a mostly agrarian economy, a year of poor harvests in 1912-13 triggered a recession, which was worsened by the onset of the War in 1914 due to supply difficulties and restrictions on emigration. With Portugal's official entry into the conflict in 1916 as a belligerent, the recession was amplified both by its impact on monetary and fiscal instability and because Portugal lost access to important raw materials and consumer goods, as well as the ability to export its products. The recession ended with a peak in growth in 1919, although monetary and fiscal instability and the volatility of output persisted until the second half of the following decade.

1. CONTEXT

The Republican uprising of 1910 made Portugal one of three republics in Europe before World War I, along with France and Switzerland. The young regime inherited fiscal imbalances from the monarchy, which had never recovered from defaulting on sovereign debt payments in 1891. The government of Afonso Costa (1913-14) took some steps toward fiscal consolidation, but the war effort promptly interrupted these efforts.

The parliament authorized Portugal's involvement in the conflict in August 1914, with the dispatch of troops to the African colonies, where they engaged in combat with Germany. However, the country did not formally adopt the status of belligerence (or neutrality) until February 1916, when Portugal seized all the 72 German and Austro-Hungarian ships that were docked in national ports at the request of the United Kingdom. Germany declared war in March 1916. Shortly thereafter, the first of two national emergency governments (the "Sacred Union") took office, bringing together the two main parties of the time to govern the country until the end of 1917. The first 30,000 Portuguese soldiers sailed from Lisbon to the Western European front in January 1917. In total, the military force mobilized on all fronts exceeded 100,000 individuals, representing more than 3% of the active population.

Politically, despite the successive victories of the Democratic Party in legislative elections, the difficulty in forming majorities led to strong political instability, which had already been present in the final years of the monarchy but was now aggravated by frequent coups and counterrevolutions. Participation in World War I brought hardship to the people, and this discontent manifested itself in frequent protests. Between January and May 1915, parliament was suspended, and there was a presidential initiative government known as the dictatorship of Pimenta de Castro. Several governments would follow until a military revolt led by Sidónio Pais triumphed in

December 1917, establishing a dictatorial presidential regime. This regime would last for a year until the assassination of its leader in December 1918.

Social unrest permeated this entire period, with the development of the labor movement, demonstrations against inflation, and constant political dissidence. In January 1916, in response to reports of speculation and hoarding allegedly practiced by some vendors, there were reports of raids on food distribution establishments throughout the country, some of them coordinated. In 1917, there were strikes in the construction sector, postal services, and telegraphs; in Beja, trade unionists and landowners prevented the shipment of wheat from the municipality throughout January; in Porto, there were bakery raids in April. In general, strikes, riots, and raids increased between early 1916 and late 1917.

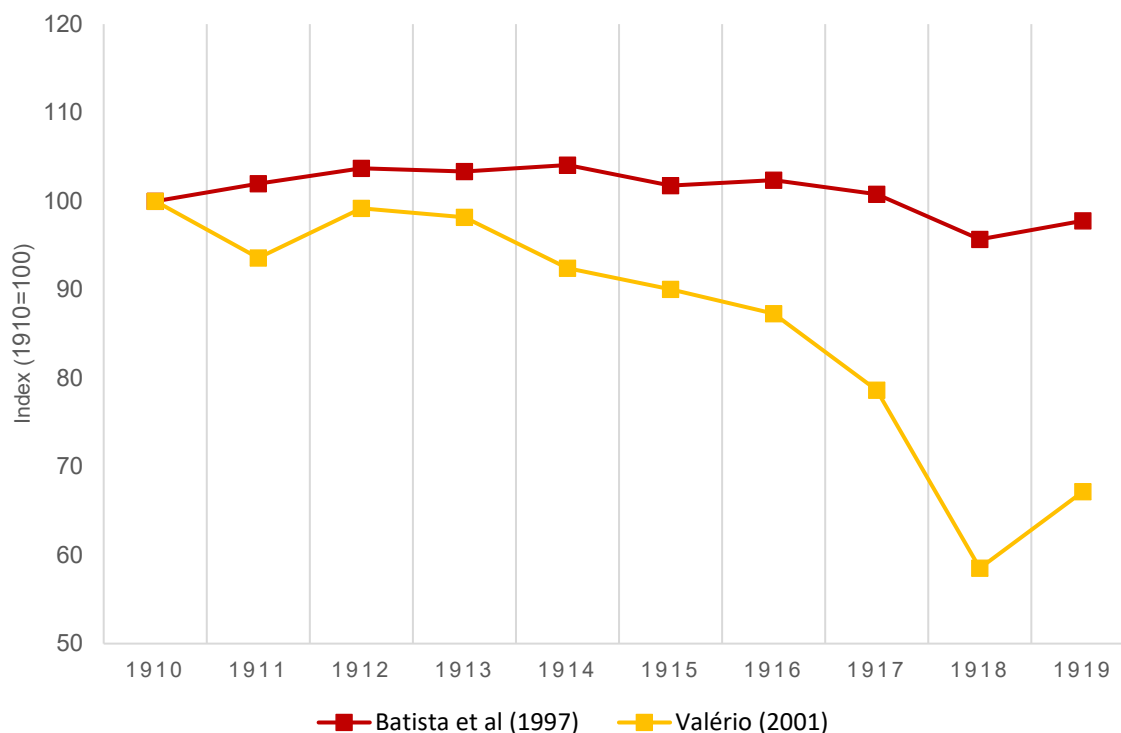
The end of the war did not bring social peace. In fact, the persistence of scarcity, high prices for certain essential goods, and the outbreak of the Spanish flu continued to worsen living conditions in the country. Between mid-1918 and mid-1920, the pandemic claimed the lives of over 100,000 Portuguese people in three waves, with the deadliest wave occurring in the second half of 1918. There were reports of the irregular functioning of factories and public offices caused by mortality and the recovery periods of the infected individuals.

2. EVOLUTION OF THE ECONOMY

Figure 1 shows the evolution of real GDP during this period, according to two series built using different methods. As explained in the methodological notes, the aggregate series available for this period are reliable for studying long-term trends but are quite noisy at an annual frequency. This is partly because many national statistics were until recently only produced with a delay of several years. During this decade, the quality of data at an annual frequency is even worse because some data collection efforts were interrupted during the war. This leads to gaps and omissions between 1911 and 1914 in many of the usual disaggregated series that the Committee uses to date the business cycle and reduces confidence in the estimates of GDP for these specific years.

There was a small initial decline in production in 1912. This does not seem to be associated with an external shock or internal political developments. The political instability and fiscal difficulties were already present and did not worsen significantly in that year. Instead, considering the weight of agriculture in the Portuguese economy, the shock likely originated in that sector. Portugal was a closed and predominantly rural economy. According to the 1911 census, 62% of the workforce was engaged in agriculture, often under self-sufficiency conditions. Industry, in a broad sense that includes small artisans, employed only 22% of the active population, and services accounted for the remaining 16%.

Fig. 1 - AGGREGATE GDP ACCORDING TO TWO SERIES



Sources: Batista et al. (1997): *nominal GDP in Batista et al. (1997)*. Valério (2001): *nominal GDP in Valério (2001)*, retrieved from Valério (1998). The implicit deflator of the respective source is applied to each series.

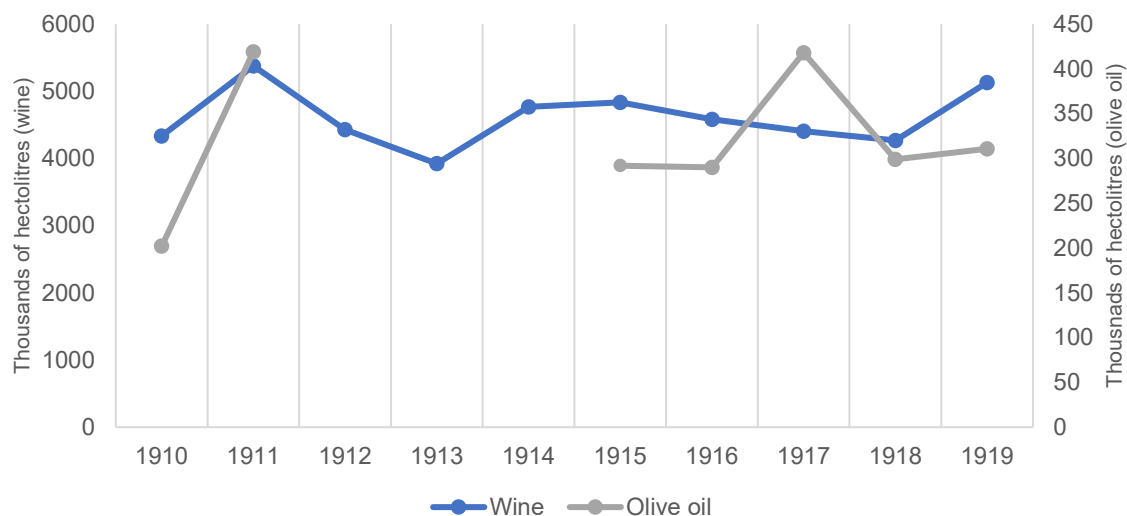
With the onset of World War I in late 1914, there was a more pronounced decline in production starting from 1915. After a slight recovery in 1916, the economy entered a rapid decline until 1918, which coincides with the two years that Portugal was active on the European front of the conflict. The war economy in Portugal resulted in various changes to the production structure and on constraints on economic activity.

To understand the business cycles during this decade and date them, it is necessary to delve deeper into the analysis of both the agricultural cycle - which was measured with greater imperfection during this period - and the impact of the Great War on the Portuguese economy.

The agricultural cycle

Figure 2 shows the cycle of the two main agricultural products in Portugal at the time: wine and olive oil. In the viticulture sector, two negative shocks stood out during this decade. First, in 1913, natural factors like pests and thunderstorms led to significant declines in the production of Port wine, which was an important export. Although these factors were not the same in the south of the country, the overall quantity of wine produced decreased. Second, between 1915 and 1918, wine production experienced stagnation or even a slight decline. This development was possibly linked to years of low rainfall and the difficulty in importing fertilizers and pesticides during the war.

Fig. 2 - WINE AND OLIVE OIL CYCLES



Source: Valério (2001).

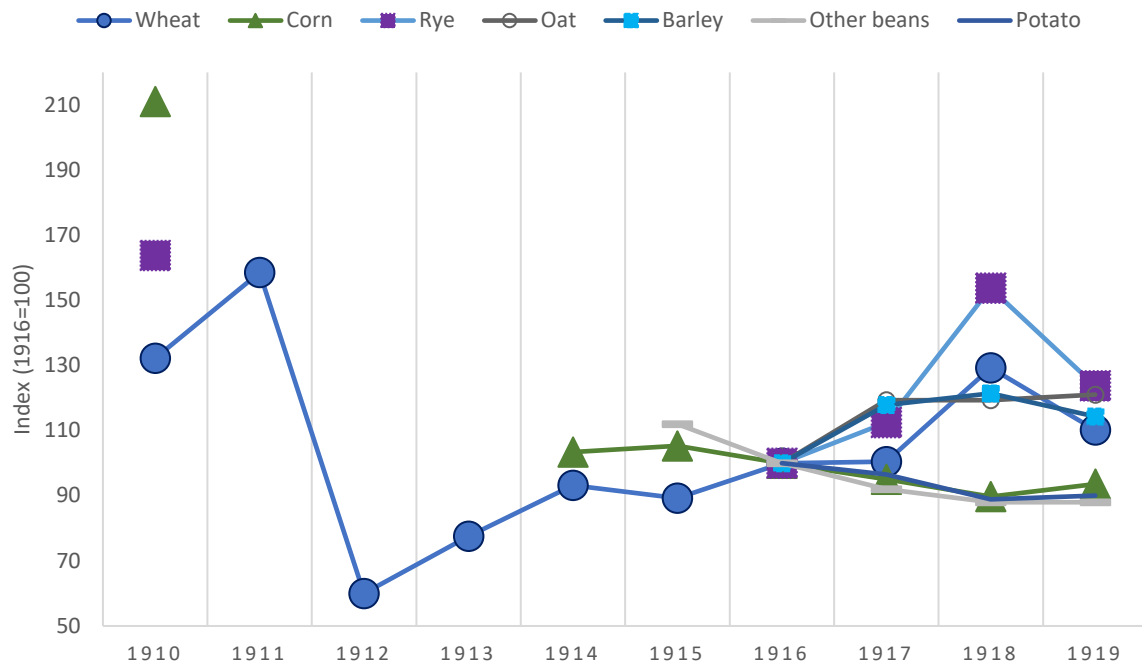
In the production of olive oil, there is no available reliable data between 1912 and 1914. However, it is worth noting that there was a peak in production in 1911. Considering the regular cycle of olive harvest and off-years, this suggests a possible contraction in 1912. Similarly, after an expansion in 1917, there is a contraction in the following year, which is a recurring pattern in the production of olive in the Mediterranean basin.

Figure 3 shows data on the harvest of major cereals, again with significant data omissions at the beginning of the sample. Wheat, the only product for which there are consecutive data between 1910 and 1914, experienced a major decline in 1912. During the period of the Great War, there are no relevant fluctuations.

In other agricultural crops, the year 1917 saw low production in water-dependent crops due to low rainfall in the autumn-winter of 1916-17. As a result, bean production decreased by 8% in quantity compared to 1916, corn by 5%, and potatoes by 3.5%. The food shortage led to the “Potato Revolt” in May 1917, following a sudden increase in the price of potatoes, which played an important role in people’s diet. The revolt led to popular raids in grocery stores and riots that resulted in more than 40 deaths.

Emigration was a way to escape the poor agricultural conditions at the time (**Figure 4**). From the establishment of the Republic until the outbreak of the Great War, emigration increased rapidly, reaching a peak in 1912 of nearly one hundred thousand individuals (including official records and estimates). The main destination was Brazil. Between 1914 and 1918, limitations on the movement of people and goods and the wartime climate kept Portuguese emigration depressed. Therefore, the indicator provided little information about the true magnitude of the deterioration of living conditions in the country.

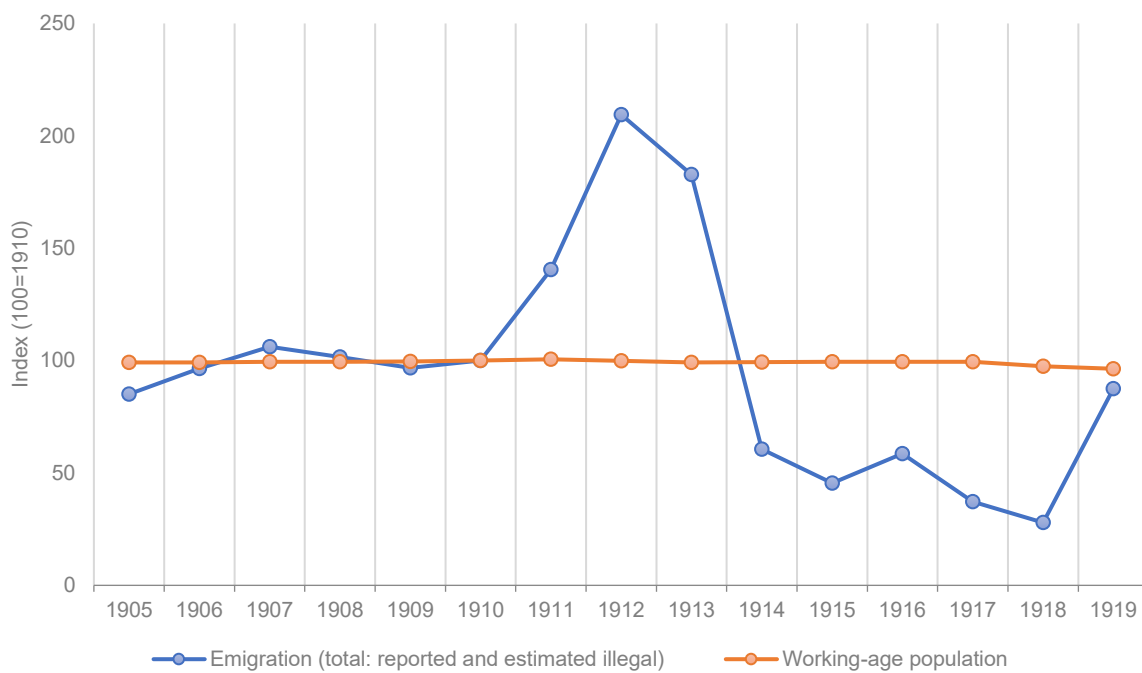
Fig.3 - AGRICULTURAL HARVESTS



Source: Valério (2001)

Note: for the years 1911 to 1915, there is missing data for some series.

FIG. 4 - EMIGRATION AND WORKING-AGE POPULATION



Source: Valério (2001), based on Baqanha (1994).

Portuguese War Economy

A decrease in emigration was one of the impacts that the war had on the Portuguese economy because people's mobility was severely restricted. Maritime and submarine warfare disrupted transatlantic connections, and the conflict with Germany and the invasion of France made land connections dangerous and difficult.

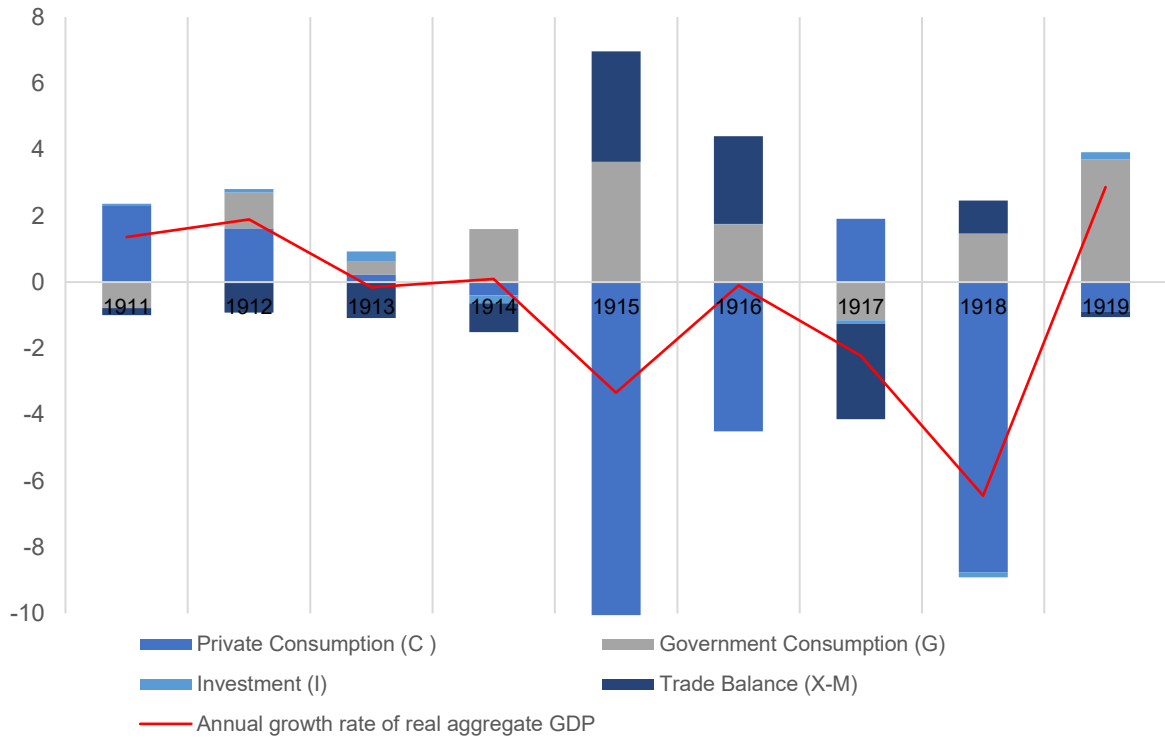
This shock to means of communication naturally had a significant impact on international trade. Portugal relied on imports of coal for heating and its nascent industry, as well as the import of wheat, which was necessary for bread production and to feed the population. There are reports of frequent raids on bakeries in 1915. Cod fishing also became impossible, and supply shortages extended to potatoes.

The government reacted to these shortages in various ways, all of which were ineffective but revealing of the scarcity of products. In August 1914, the Commission for Subsistence was created to analyze and establish supplies of essential goods. The export of coal and certain foodstuffs was prohibited, a level of interventionism that was uncommon until then. In April 1915, the prices of essential foodstuffs were fixed by municipal regulatory commissions. Later, it became mandatory to report production quantities. The Industrial General Warehouses were also established with the mission of ensuring the essential supply of industries, which often ceased operations due to a lack of raw materials. In 1917, the Ministry of Agriculture was created with a program to increase agricultural production and productivity, which attempted, among other things, to form agricultural cooperatives for cultivation on communal land and fallow land and provide seeds and fertilizers to producers.

Figure 5 shows the breakdown of GDP from the expenditure perspective. The impact of the war on GDP in 1915 and 1916 was almost exclusively due to a collapse in private consumption, consistent with the scarcity of goods. Throughout this period, private consumption remained subdued, with another collapse in 1918. Initially, in 1915 and 1916, imports fell more than exports (in value), but in 1917 and 1918, the escalation of maritime warfare reduced both facets of international trade to a minimum. **Figure 6** shows the decline in the movement of goods in quantities at national ports, which were the main route for external trade.

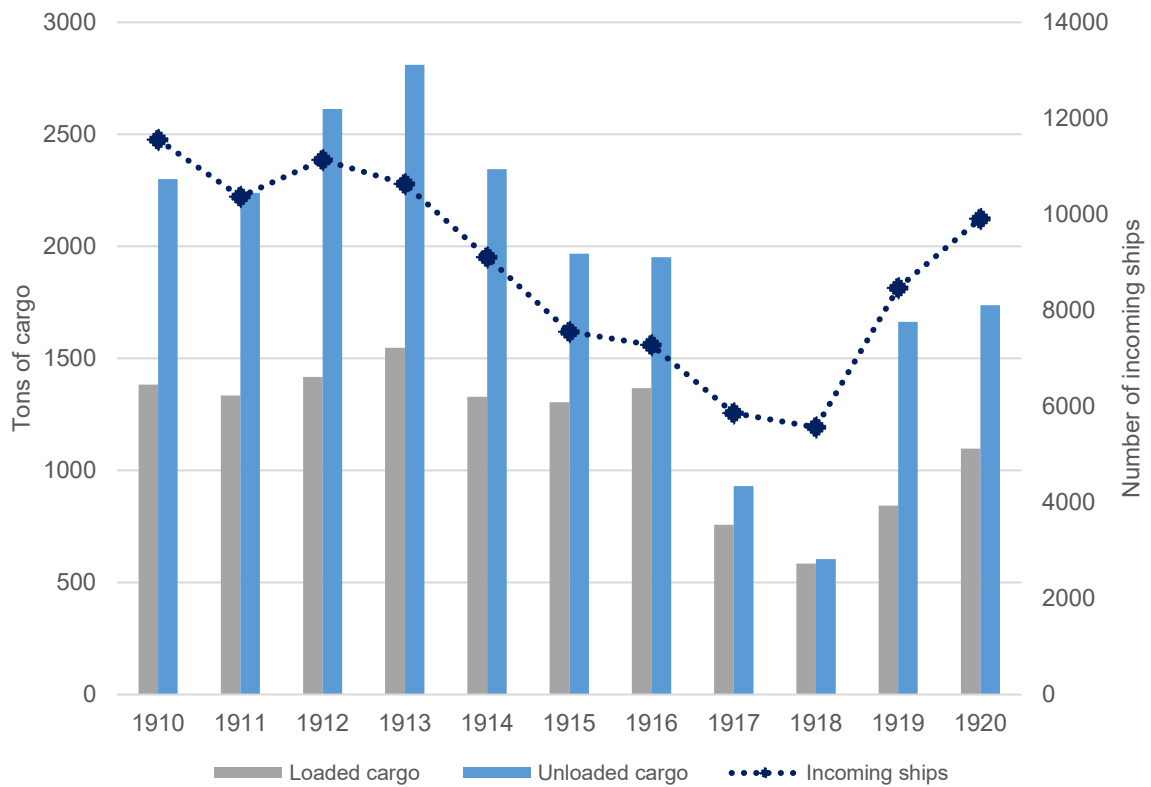
The increase in public consumption in 1915 is also visible in **Figure 5**. What is more surprising is its limited contribution to the economy in 1917 and 1918. The economic impact of the war on the Portuguese economy is distinct from that on the American, English, or German economies. While in those countries, military expenses were focused on weapons and uniforms that stimulated domestic production, Portugal produced little weaponry, and the payments associated with military expenditure went abroad. They were mostly financed through credit from the Bank of England. Thus, the largest portion of those expenses represented the salaries of the military personnel deployed overseas, which had little impact on consumption in Portugal.

Fig. 5 - COMPOSITION OF REAL AGGREGATE GDP CHANGES (EXPENDITURE APPROACH)



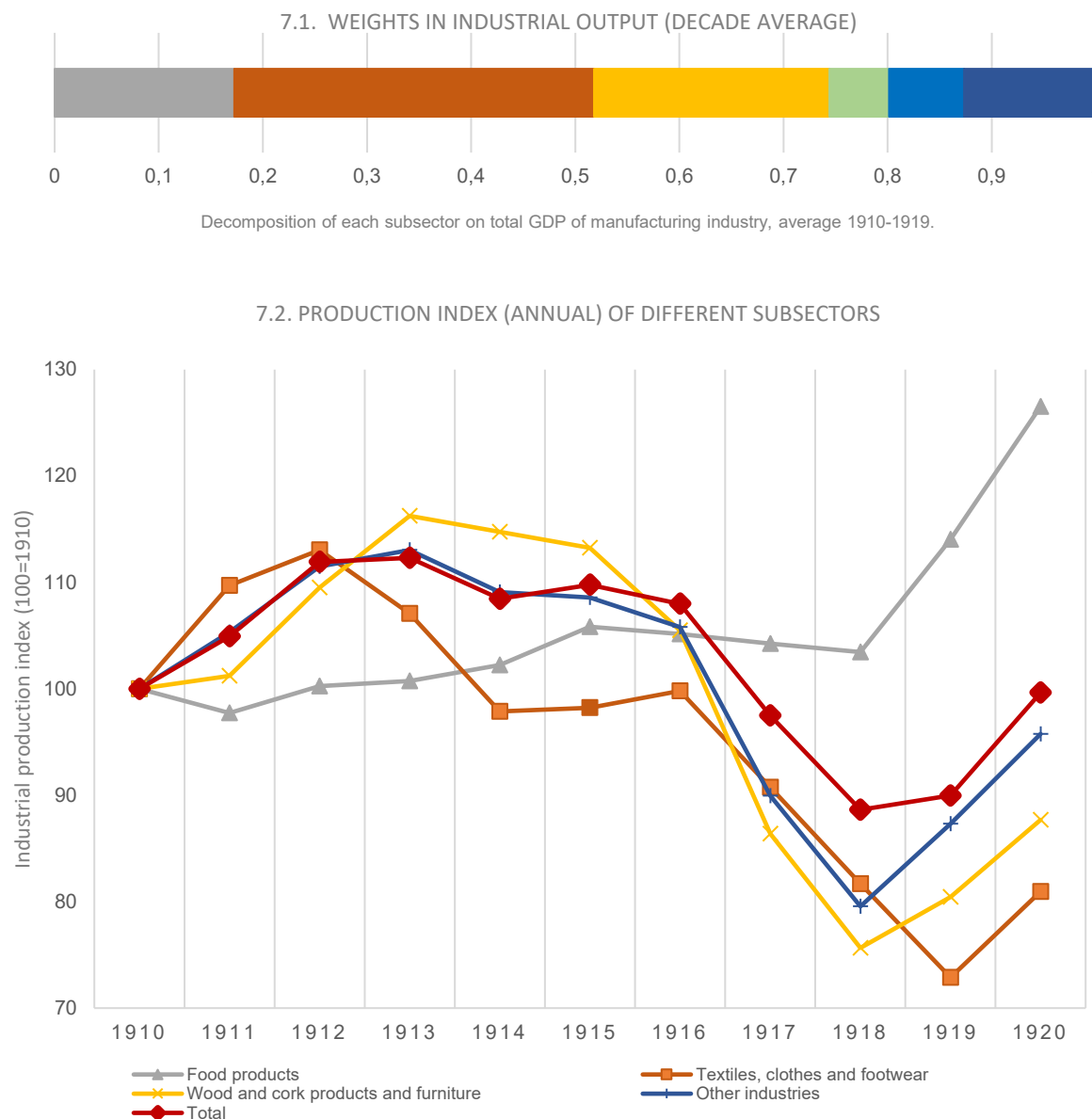
Source: Batista et al (1997).

Fig. 6 - PORT MOVEMENT



Source: Valério (2001).

Fig. 7 - MANUFACTURING INDUSTRY



Source: Batista et al (1997).

Figure 7 displays the indices of industrial production for the main subsectors of the manufacturing industry together with their relative weights in the sector. Textiles were the largest subsector in 1917, representing 35% of the output of the manufacturing industry and employing approximately 33% of the industrial workforce. Out of the 50 largest national companies at the time (by asset value), 28 were in the textile sector (Neves, 2007). The wood and cork industry followed, accounting for 23% of the manufacturing industry's output and employing 11% of the active industrial population. The food sector accounted for 17% of the manufacturing industry's output and employed 21% of the active industrial population, particularly in canning and cereal milling.

The disparate behavior of different industries also highlights the peculiarities of the Portuguese war economy. The textile industries, which were highly dependent on raw material imports, reached a peak in 1912 and then declined continuously, except for a stagnation period in 1915-16, only resuming growth in the following decade. The wood, cork, and furniture industry, which was heavily export-oriented, followed a similar trend, affected by the contraction in external demand and the difficulties in marketing goods associated with the conflict, but with a trough in 1918. Portugal's involvement in the conflict in 1916 worsened the pace of production decline for both sectors. Both sectors also felt the absence of coal imports.

Most subsectors experienced similar dynamics, except for the transportation machinery industry, which continued to grow, and, especially, the important food industries, which saw their production surprisingly remain constant or even show a tendency for growth, despite adverse conditions in terms of supplies, prices, and market access. The canned food industry was the driving force behind this subsector, as Portugal was the world's leading producer of canned goods, which were used by mobilized military contingents.

Fig. 8 - COMPOSITION OF GDP CHANGES (SECTORS)

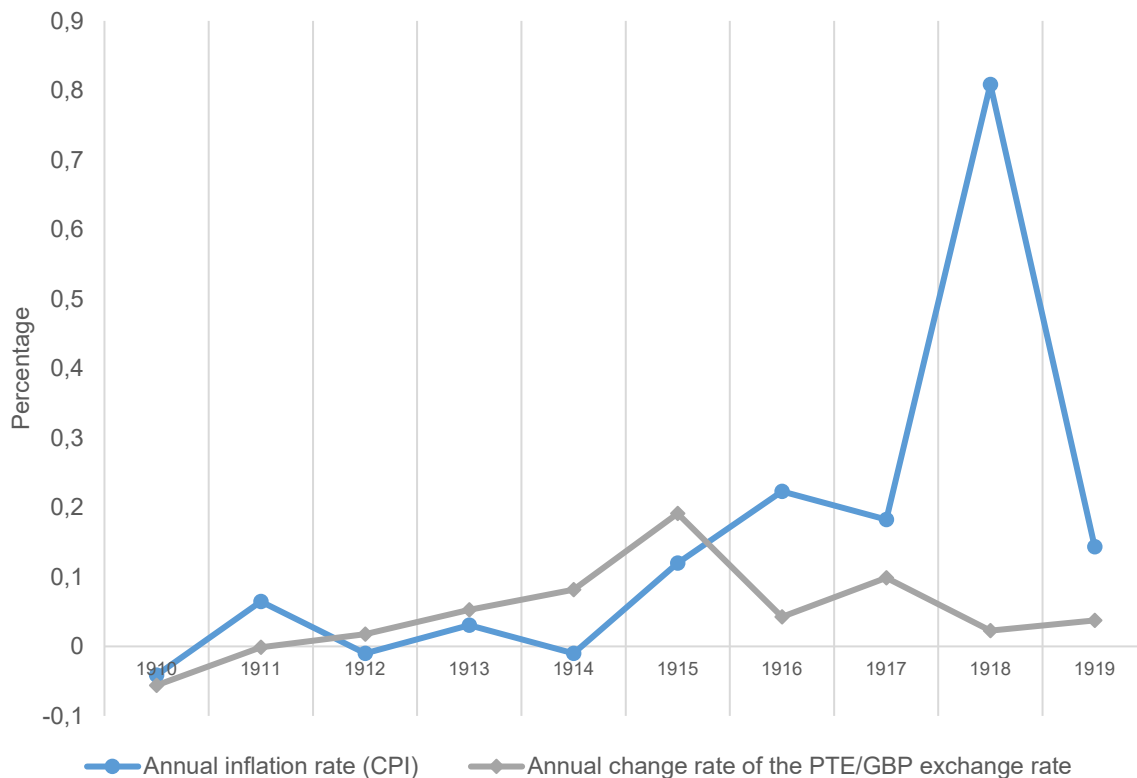


Source: Lains (2003), based on Batista et al (1997).

When we look at the decomposition of GDP by sector, it is important to note that, on average during the decade, about 35% of the output was in the primary sector, 27% in the secondary sector, and 38% in the tertiary sector. Therefore, when we see in **Figure 8** that industry is responsible for a significant portion of the GDP decline in 1917, considering its limited weight, this corresponds to a major contraction within this sector. In turn, the contraction of services in 1918, associated with the worsening difficulties of the war compounded by the impact of the pneumonic flu, contributes to the recession, while its recovery in 1919 is one of the drivers of economic recovery. However, this rise and fall of services should be viewed with some caution. This decomposition of GDP comes from a product series (authored by Lains, 2003) that exhibits anomalous behavior in 1919, with a GDP growth of 8.2% in that year, much higher than the available series (between 2.2% and 2.8%). This is due to a significant update in the weight of the services sector in 1919 by Lains (2003), coinciding with the significant growth in the financial sector that year.

Finally, the last important effect of the war on the business cycle is in the fiscal and monetary situation. The high deficits brought about by the war were monetized through debt issuance. In fact, in 1918, this monetization was foreseen in a decree with the force of law governing the Banco de Portugal. As shown in **Figure 9**, inflation skyrocketed. Because this inflation also occurred in other countries involved in the conflict, the exchange rate against the pound sterling did not change much. World War I destroyed the national and international trend of stabilization around the gold standard.

Fig. 9 - INFLATION AND EXCHANGE RATE



3. CALIBRATION OF PEAKS AND TROUGHS

There is little doubt that the Great War caused a recession in Portugal. In turn, practically all indicators show a recovery in 1919 or 1920, with most of them pointing to the former date. Therefore, the Committee had no difficulty in dating the trough of the recession in 1918.

Dating the peak requires further discussion. On one hand, the effects of the war became particularly noticeable from 1917, when Portugal entered the conflict and lost any access to international trade by sea or land. On the other hand, the effects of the war on economic activity were already felt from 1915, especially with the impact on private consumption. Lastly, there was a contraction in agricultural production in the agricultural year of 1912-13 from which the economy had not clearly started to recover when the war broke out. Therefore, it is defensible to date the peak in 1916, 1914, or 1912. In the first case, the economic contraction is associated with the entry into the conflict, in the second case, it is associated with the onset of the Great War, and in the third case, it is associated with the agricultural crisis.

The Committee decided to date the peak in 1912. The three phases of this recession resulted from three consecutive shocks from which the economy never truly began to recover before the next shock emerged. Therefore, each of them exacerbated the recession, contributing to one of the longest recessions in the Portuguese economy during the First Republic.

4. CONCLUSION

At the beginning of the Republic, Portugal was a heavily agrarian economy that was closed to the outside world. The exception was canned goods and Port wine in exports, as well as the dependence on wheat imports for food and coal for the nascent domestic industry.

In the agricultural year of 1912-13, adverse natural conditions led to a contraction in wine and cereal production. The main crops did not recover the following year, and in 1914, the outbreak of the Great War brought a new recessionary shock to the Portuguese economy. Supply difficulties caused a significant decline in household consumption and heightened social tension, partly associated with the pressure that urban areas exerted on rural areas in terms of food supply. Emigration halted with the closing of borders, which abruptly ended the boom in emigration to Brazil and the United States in previous years.

The impact of the war intensified in 1917 with Portugal's entry into the conflict. Not only did it place a heavy burden on public finances without a corresponding stimulus in domestic demand for industries, except for canned goods, but it also closed maritime borders (due to German submarine actions) and made land mobility beyond Spain dangerous or impossible.

With the end of the war, the opening of borders allowed for the resumption of supplies and the distribution of production, triggering an economic recovery. However, this recovery was not complete, and economic activity remained depressed in the first half of the 1920s. The Great War left a significant financial and fiscal instability in Portuguese history.

REFERENCES CITED IN THE TEXT

(For a comprehensive list of the sources, see methodological note)

1. Lains, Pedro (2003). “Os Progressos do Atraso – Uma Nova História Económica de Portugal”. Imprensa de Ciências Sociais, Lisboa.
2. Neves, Pedro (2007). “Grandes Empresas Industriais De Um País Pequeno: Portugal da Década de 1880 à 1ª Guerra Mundial”. Doctoral Thesis. ISEG: Lisboa.