The Effect of World War II on the Value of Turkish Lira

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Abstract

The paper investigates how news about WWII (Second World War) reflected in the exchange rate fluctuations of the Ankara bourse between 3 January 1938 and 31 December 1946 as Turkey was a neutral country. To identify abrupt changes due to political events the research uses framework of Bai and Perron (1998,2003). The daily exchange rate data (the value of Turkish Lira against the British Pound, the US dollar, the Swedish Krona and the Swiss Franc) are obtained from *Akşam,* which was the widely read newspaper and published between 1938 and 1946. The empirical findings indicate that the war news has significant effects on the value of Lira. The occupation of Poland known as the beginning of the war along with the devaluation, led to lower value of Lira during the war.

Introduction

Wars might affect the value of national currencies due to economic fluctuations such as the changes in money supply, budget deficits, and inflation while political factors and news on the conflicts could lead to foreign exchange rate changes. The previous literature on, the relationship between war-related news and exchange rate generally focuses on the American Civil War, the First World War and the Second World War. For instance, Pollard (1886) argued that, bad news on the war have negative effect on the Confederate currency. Mitchell (1903) emphasized that, the influence of war news has more effect on currency than the effect of financial events. All the victories increase the value of currency and every defeat decreases the value of currency. Willard, Guinnane and Rosen (1996), using Mitchell's (1903) data set, tried to analyze the effects of the events which occurred during the American Civil War on the value of the dollar against gold. They concluded that some breakpoints coincide with events that historians consider important, while other breakpoints do not have as much effect on the financial market as expected. Weidenmier (2002) compared the breakpoints with the study of Willard, Guinnane and Rosen (1996). The results show that, some common breakage dates were determined, but it was emphasized that the northern and southern investors reacted differently to the events and that the news about the civil war did not always have a symmetrical effect on the value of money. Smith and Smith (1997) discussed the course of the US dollar-gold price between 1862 and 1879, the period in which the gold-dollar convertibility was suspended. Findings confirm the existence of the impact of financial and military news on the price of gold-dollar, similar to the results of previous studies. Grossman and Imai (2009) similarly analyzed the impact of the possibility of Japan's return to the gold standard on the value of the Yen in the 1920s. While the balance of power between the two parties and the deterioration of diplomatic relations with China had an impact on the value of the Yen, democratization movements and the right to vote did not change the value of national currency.

Hall's (2004) study shows that the news about the number of soldiers killed and captured has impact on the currency of Great Britain, France, Italy, Germany and Austria-Hungary against the Swiss during the World War I. Durate, Freidinger and Hoffmann (2015) extended the study of Hall (2004). This study demonstrates that there is a causality between the exchange rate of belligerent countries and the war news from Western front and Eastern front. However, the exchange rate fluctuations were more associated with news from Western front than news

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from Eastern front. Philips (1988) is to observe the impact of the news about the war in South Vietnam on the real exchange rate. The Tet Offensive attack, an important breaking point in the war, was perceived as the defeat of the South Vietnamese government then the currency depreciated. Warburton (2009) observed that the short-term depreciation of the dollar coincided with the Iraq War.

Kanago and McCormick (2013) examined Dollar-Pound exchange rate during the first nine months of Second World War. In this paper, during the Second World War the military success of Germany caused the decrease in the value of British Pound. Their findings show that, there are totally seventeen breaks in the Dollar-pound exchange rate. Fourteen breaks are related with military events and three breaks are connected with policy changes. Hanedar, Gencer, Demiralay and Altay (2019) evaluated the dissolution process of the Ottoman Empire over the reflections of the Ottoman lira against the currencies of the three non-participating countries Switzerland, the Netherlands and Sweden. According to their findings, the depreciation of the lira decreased with the news of the end of the war while the depreciation of the lira increased with reports of the collapse of the Ottoman Empire and the occupation of the Entente.

Although Turkey tried to protect their non-belligerent status throughout the war, the Second World War shaped the Turkish economic policy. Therefore, the defense expenditures were increased by the government due to the possibility of invasion. The government took various drastic economic measures to meet the expenses of army, such as wartime taxation, law of national prevention, wealth tax and monetary expansion. Consequently, as seen in figure below, the period has witnessed fluctuations in Turkish lira against certain currencies which were traded in the Ankara and İstanbul Bourse. In this period, Central Bank of Turkey applied fixed exchange rate system to protect the value of Turkish Lira, for all that the war-related news had an impact on the national currency.
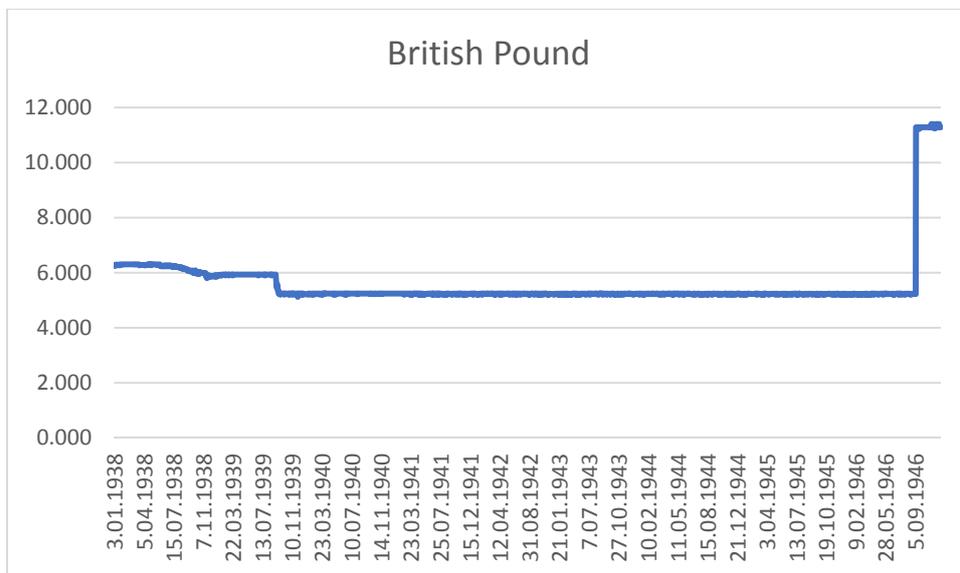

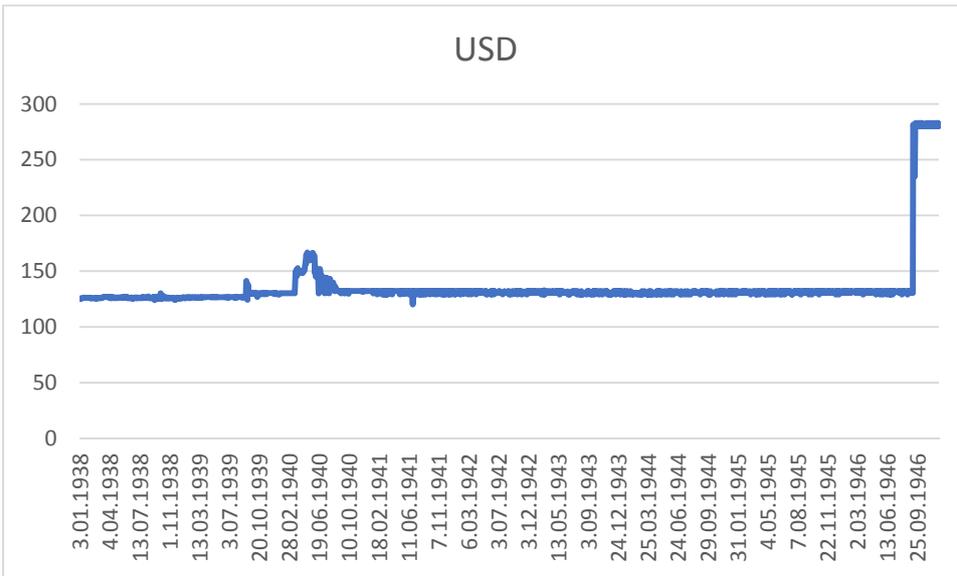**Figure 1**: The value of one Lira against, British Pound

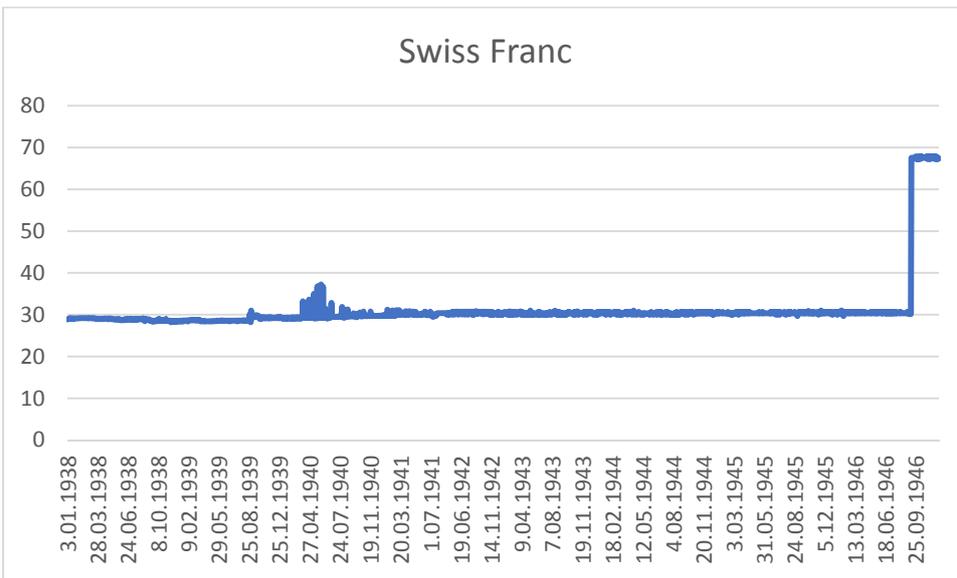**Figure 2**: The value of one Lira against US Dollar

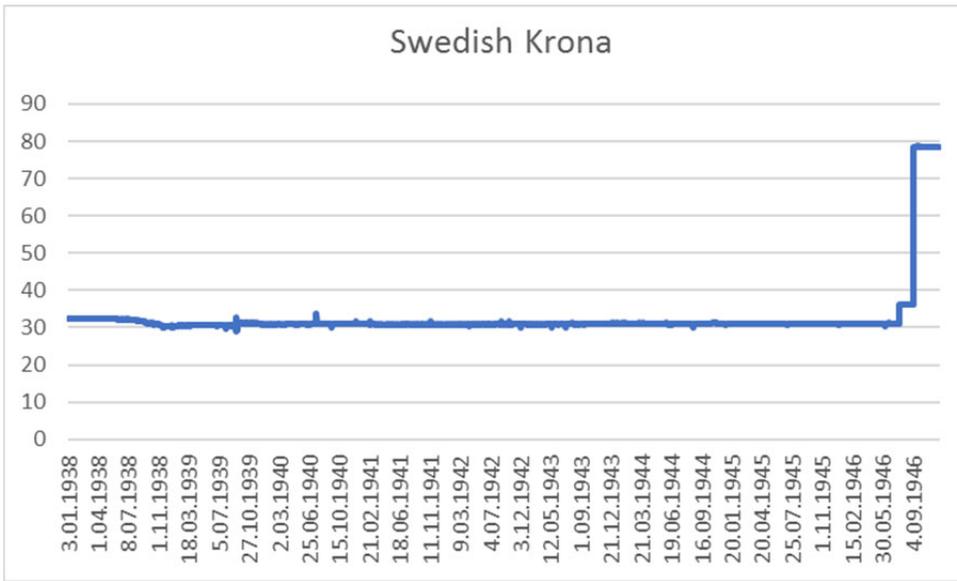**Figure 3**: The value of one Lira against Swiss Franc

Figure 4: The value of one Lira against Swedish Krona

To this end, the aim of this study is to examine the effects of war-related news, on exchange rate traded on the Ankara Stock Exchange in Turkey during World War II. As the previous studies generally focus on the parties which are directly included in a conflict, this paper contributes to the literature with the effect of war-related events on the value currency of a non-belligerent country.

1. The Turkish Political Economy during the War

Turkey was a neutral country during the WWII and did not participate in the conflicts by adopting different policies. Despite the fact that Turkey support its military force to defend and protect home territory against a possible invasion by belligerent countries. An alliance agreement was signed with Britain and France on 19 October 1939 in Ankara against the expansionist policies of Germany and Italy. In 1941, there were several events that has alerted Turkey's risk perception namely, the invasion of the Balkan States and the early-period rapprochement between the Soviet Union and Germany. Accordingly, President İnönü's reply to Hitler, the Turkish-German Non-Aggression Pact and the attack of Germany to the Soviet Union in 1941, has alleviated Turkey's security concerns (Oran, 2018). In 1943, after liberation of Stalingrad from Germany, Turkey has regarded the revisionist policies of the Soviet Union as menace to its security. Afterwards, Turkish Government has officially declared war on Germany and Japan 23 February 1945 even though the war has already come to an end.

Despite its non-belligerent status, the war has still affected Turkish economy through different channels. The male population has been disproportionately conscripted due to the possibility of Axis Powers aggression towards Turkey. With the withdrawal of working population, the male population in then Turkey's case, from the production area, there has been a dramatic decline in production (Pamuk, 2018). As a result of those events, as seen in table below, the inflation rate has increased, the gross national product (GNP) has declined dramatically, money supply has increased and the total trade value has fluctuated. The government took various drastic economic measures to meet the expenses of army, e.g. wartime taxation, law of national prevention, wealth tax, and monetary expansion.

Table 1. Key economic indicators of Turkish Economy, 1938-1946

Year	GNP at constant prices (million TL)	Consumer price index	Wholesale price index	Total Trade (thousand USD)	Money Supply (thousand TL)
1938	8,538	100	100	233,918	219,422
1939	9,128	102	101	192,145	308,079
1940	8,678	111	127	130,939	433,900
1941	7,780	132	175	146,405	543,502
1942	8,217	221	340	238,994	765,545
1943	7,413	322	550	312,074	833,654
1944	7,033	330	459	304,182	994,514
1945	5,960	333	445	265,233	918,567
1946	7,864	320	428	333,479	975,439

Source: Turkish Statistical Institute, Statistical indicators 1923-2009, Tekeli and İlkin (2016).

In this period, Central Bank of Turkey applied fixed exchange rate regime to protect the value of Turkish Lira. Moreover, trade was generally based on barter system which requires swap premium exchange rate. In this system when the foreign currency entered Turkey, government paid a premium of 40%. Conversely, they received a premium of 48% when the foreign currency left to the country. In 2 December 1940, Britain and Turkey have signed a payment agreement in which the value of pound against Turkish Lira was fixed 5.2 until there was a change in gold prices in London. Government has devalued national currency in 7 September 1946 to increase exports (Tekeli and İlkin, 2016).

2. Method and Data

In this study, Bai and Perron (1998, 2003) structural break test has been employed to determine the changes in the value of lira against four different currencies. This is an econometric method based on the determination of the changes in the data endogenously instead of determining exogenously. Therefore, the test can help to avoid speculative evaluations in identifying the important dates during the period examined. Bai and Perron (1998, 2003) structural break test determines the number of structural breaks, assuming that there is maximum five structural breaks and starting from a situation where no breaks occur. To estimate the break points, Bai and Perron framework uses the following system of linear regressions:

$$y_{t} = c_j + \varepsilon_t t = T_{j-1} +1, \ldots T_j$$

where y_t is Lira's value against four currencies at the time t and j (j = 1, ..., m+1) denotes segments defined by m structural breaks in sudden change points. In the equation, c_j is an estimated intercept an ε_t represents a white noise error term.

We estimated break points which correspond with war-related news. We expect the bad news from the war to cause decreases in the value of national currency. Reversely, the good news from the war would induce the depreciation of currency. Afterwards, the short-run and long-run changes are calculated to see the magnitude of these changes.

The daily exchange rate data has been obtained from *Akşam* newspaper between 1938 and 1946. These are British Pound, the US dollar, the Swedish Krona and the Swiss Franc. Between 1st April and 31st March 1941, exchange rates were traded at Ankara Bourse. The bourse was moved to Istanbul after this period (Yılmaz, 2015).

3. Preliminary Results

Table 2 contains breaks, events, short and long run change for four countries during the period in question. Break points which obtained from Bai and Perron test, were calculated for the short-run and long-run changes.

Table 2. Bai and Perron test results and corresponding events, 1938-1946

Exchange rates	Break dates	Event	Short-run Change (%)	Long-run Change (%)
British Pound/Lira	*6.09.1938*	**The flow of gold from Europe to USA (political fragmention)**	0	-12
	26.08.1939	**The invasion of Poland and violent conflict news**	-5	-10
	9.07.1946	**Devaluation**	0	65
USD Dollar/Lira	*22.08.1939*	**The invasion of Poland and violent conflict news**	0	9
	16.02.1946	**Devaluation**	0	35
Switzerland Franc/Lira	*22.08.1939*	**The invasion of Poland and violent conflict news**	0	10
	13.07.1946	**Devaluation**	0	80
Swedish Krona/Lira	*6.07.1946*	**Devaluation**	0	97

As seen in the table, pound has three breaks: 6 September 1938, 26 August 1939 and 7 July 1945. The former one is the flow of gold from Europe to USA, as a result of political fragmentation in Europe. The second one coincided with the invasion of Poland and the violent conflict among France, Britain and Germany. Although, there were negative news about war, the value of Turkish Lira has increased against Pound due to the domestic dynamics in Britain. The last breaking point is seen to coincide with the devaluation in 1946, which represent a breaking point for all the other currencies as well.

Apart from the effect of devaluation, the invasion of Poland constitutes another breaking point for the value of Turkish Lira against US dollar. In contrast with the pound case, the value of value of dollar has increased against Turkish Lira. This is mainly because of two factors: the negative effect of the news about violent conflict on Turkish risk perception and the non-belligerent status of the USA between 1939 and 1941.Similarly, Turkish Lira has lost value against franc due to the invasion of Poland.

4. Concluding Remarks

Despite Turkey was a neutral country and adopting fixed exchange rate regime, the results show that negative news about war has negatively affected the value of Turkish Lira.

Negative news about the invasion of Poland and devaluation resulted in changes in the value of Turkish Lira.

The contribution of this study to the existing literature is two-fold. First, in the literature, previous studies generally focus on belligerent countries, whereas this study investigates the effect of war-related news on the currency of a non-belligerent country. Second, a unique historical data set was generated from the *Akşam* Newspaper and it enables the evaluation of historical events through empirical evidence.

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