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ECONOMIC EFFECTS OF JULY 15 COUP ATTEMPT IN TURKEY: COMPARING COUP ATTEMPT VS. COUP D'ÉTAT

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ABSTRACT

In the coup histories of Turkey; its basic character, design, structure and implementation process of July 15 Coup attempts differ fundamentally from the previous 1960s and 1980s coups d'états. The most important difference is that the coup attempt has not changed government hands, unlike the previous coups. Therefore, recent failed coup attempt did not succeed in dragging Turkey into a new economic and political instability. Media and communication tools have made an important contribution to the prevention of the coup attempt as well.

In order to analyze the effect of coups and coup attempts on the Turkish economy, both yearly and daily data for econometric analysis is used in this paper. Purpose of this study is to reveal the effect of coups in 1960 and 1980 and to compare the July 15 coup attempt with these coups. The results indicate that the July 15 coup attempt has had little or even short-term negative impact on GDP with annual data econometric analysis. In daily analysis, the short-term (immediate or daily) effect is an increase in the exchange rate and an increase in the stock market. In the long run (6 months), both the exchange rate and the interest rates have raised permanently. Consequently, the effect of the 2016 coup attempt is one tenth of 1960 coup, and one fifth of 1980 coup.

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STRUCTURED ABSTRACT

The coup stands politically, "suddenly and decisively, especially an act that influences the government's change illegally or forcibly". According to this definition, a coup is characterized by "sudden", "stable", "illegal" and "power". However, the coup attempt is defined as "illegal and open attempts to play the seating actor by the military or other elite in the state". It is distinguished a successful coup by an failed coup by whether or not the coup is "confiscated for at least seven days" (Powell and Thyne, 2012). Initially, researchers in the literature sought to elucidate the reasons for the emergence of military coups. These studies were conducted by Acemoğlu and Robinson, 2001; Collier and Hoeffer, 2006 & 2007; Leon, 2014; Svolik, 2012. Further studies are on the economic impacts of coups by Dube, Kaplan and Naidu (2011) and Berger, Easterly, Nunn and Satyanath (2013). This paper distinguishes the economic impact of the coup d'état from its approach by examining it relatively as not only as a form of political instability but also as a form of social and economic instability.

A great majority of the coup and coup attempts that have taken place since 1950 are in Africa and Latin America. Between 1960 and 1975, a large number of coups and coup attempts were made. In this process, a series of coups and coups attempted in Latin America and in African countries that survived the special colonization. Since 2010, there are 10 coup attempts in the world, 9 coup took place. The countries involved in an attempt in this period were: Guinea-Bissau, Madagascar, Guinea, Mali, Sudan, Papua New Guinea, Lesotho, Burkina Faso, Burundi and Turkey. Countries experiencing a blow include: Niger, Egypt, Guinea-Bissau, Mali, Maldives, Ukraine, Burkina Faso and Thailand. The common features of these countries, which are exposed to the coup attempt or the coup d'etat, are the emerging ones with long-term political and economic instabilities when all the coup attempts or coup d'etat occur. When we look at the history of the coup in Turkey, it encountered the coup d'etat on May 1960 and September 1980, and the coup attempt on July 15 since 1950. In addition to these defeats, Turkey suffered from the March 28, 1971 and April 27, 2007 crashes and the "February 28," which is called the "Postmodern Impact". When we look at the turn back to May 27, 1960, we can say that since the establishment of modern Turkey, there have been important developments and economic stability. After 20 years from the 1960 coup d'état, the 1980 military coup d'état took place as a second coup d'état in Turkey. Failures of parliamentary democracy, political terrorism, economic crisis and changes in the international political context are the main factors causing the coup. The first sign of the clash between President Erdogan and Gulen was revealed by "parallel structuring" on 17-25 December 2013. In the following years the tension between the AK Party government and the Gulenists continued to increase due to the structure called "parallel". As a result, on July 15, 2016, a coup planned by a group within the FETO terrorist organization was attempted to be implemented. This anarchic coup attempt was suppressed by the intervention of the people, businessmen, politicians and soldiers around President Erdogan and thus the July 15 coup attempt took its place in history as a coup d'état suppressed by the people.

The main purpose of this study is to reveal the effect of coups especially 15 July attempt on the Turkish economy by using econometric method. The linear regression analysis is done with Ordinary Least Square (OLS) estimation. Two data sets are used: Daily and yearly data. To test our hypothesis, dummy variables for both short and long term effect of the coup is used for both data sets. With the yearly data, the effect of two coup d'etats and coup attempt could be compared on the main economic indicator, i.e. GDP. With the daily data, direct influence of 15 July coup attemp on stock market, exchange and interest rate would be revealed. According to econometric results, it is found that the significant effect were at most 1960, then 1980 and at least 2016, respectively. The impact of the 2016 coup attempt is one tenth of the 1960 coup d'etat and one fifth of the coup d'etat of the 1980.

15 July 2016 coup attempt has been analyzed using daily data to test whether the impact on the exchange rate, interest rate and stock market is in the form of a shock or permanent or not. US dollar buying rate, CBT weighted funding cost and BIST100 price index is used as an indicator for exchange rate, interest rate and stock market, respectively. To make comparison between the periods, the data starts 6 months before and 6 months after the coup attempt. As a results, the July 15 coup attempt led to a permanent increase in the long term (6 months), despite a short-term (daily) decline in the exchange rate. Despite the fact that the interest rates do not have a short-term effect, it has statistically significant increase in the period following the coup attempt. On the stock exchange price index, there is only a short-term positive impact. Consequently, the July 15 coup attempt had little or even negative impact on the GDP shown by the annual econometric analysis. In the daily analysis, the short-term (immediate or daily) impact is a decline on exchange rate and an increase in the stock market price index. In the long term (6 months) both the exchange rate and the interest rates have raised permanently.

Keywords: Coup d'etat; Coup Attempt; 15 July Coup Attempt; Turkey; FETO

TÜRKİYE'DE 15 TEMMUZ DARBESİNİN EKONOMİK ETKİLERİ: DARBE İLE DARBE GİRİŞİMİ KARŞILAŞTIRMASI

ÖZET

Türkiye'nin darbeler tarihinde, 15 Temmuz darbe girişimi niteliği, tasarımı, yapısı ve uygulanması bakımından daha önceki Mayıs 1960 ve Eylül 1980 darbelerine göre temelde önemli farklılık göstermektedir. En önemli fark, 15 Temmuz darbe girişiminde önceki darbelerin aksine iktidarda olan hükümetin darbe girişimiyle el değiştirmemiş olmadığı gibi darbeye girişiminin başarısız olmasında aktif rol oynamıştır. Bu nedenle, 15 Temmuz başarısız darbe girişimi, Türkiye'yi yeni bir ekonomik ve siyasi istikrarsızlığa sürüklemeyi başaramamıştır. Bunda, medya ve iletişim araçlarının da etkin kullanmı, halkın darbeye karşı zamanında tepki vermesine veya direnmesine yardımcı olduğunu ve darbe

girişiminin başarızlığa uğramasında önemli bir rolu ve payı olduğunu söylemek gerekir.

Darbe ve girişimlerinin ekonomi üzerindeki etkilerini analiz etmek için bu makalede yer alan ekonometrik analizlerde hem yıllık hem de günlük veriler kullanılmıştır. Makalenin amacı 1960 ve 1980 darbelerinin ekonomik etkilerini ortaya koyarak sözkonusu darbeleri 15 Temmuz darbe girişimi ile ekonomik yönden karşılaştırmaktır. Sonuçlar, 15 Temmuz darbe teşebbüsünün yıllık veri ekonometrik analizi ile reel GSYİH üzerinde çok az veya kısa dönemli olumsuz bir etkisi olduğunu gösteriyor. Günlük analizde, kısa vadeli (anlık veya günlük) etki, döviz kurundaki ve borsadaki artıştan kaynaklanmaktadır. Uzun vadede (6 aylık dönemde) ise hem döviz kuru hem de faiz oranları üzerindeki etkisi kalıcı olarak artmış görülmektedir. Sonuç olarak, 15 Temmuz 2016 darbe girişiminin etkisi 1960 darbesinin onda biri ve 1980 darbesinin ise beşte biri kadar olduğu söylenebilir.

Anahtar Kelimeler: Darbe; Darbe Girişimi; 15 Temmuz darbe girişimi; Türkiye; FETO

1. Introduction

Coup is an original French thought of the blow and it means “motion or movement” in general. The coup d’état, accordingly means "a coup or blow against the state". However, in politics this means "an action that is sudden and decisive, particularly affecting the change of government, either illegally or by force". In other words, a coup in this definition is characterized by "sudden", "resolute", "illegal" and "power". Powell and Thyne (2012) define a coup attempts as “illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive" and distinguish a successful coup from a failed coup by whether the perpetrators were able to “seize and hold power for at least seven days."

In the literature, when military coups often began to emerge, researchers sought to elucidate the reasons for the emergence of military coups (Acemoglu and Robinson, 2001; Collier and Hoeffer, 2006 and 2007; Leon, 2014; Svolik, 2012) rather than focusing on the economic effects of the coup except that studies of Dube, Kaplan, and Naidu (2011) and Berger, Easterly, Nunn, and Satyanath (2013).

Existing literature related to the economic effects of the coup is to investigate the relationship between political instability used coups as a proxy and economic growth (Aisen and Veiga, 2011; Alesina, Ozler, Roubini, and Swagel, 1996; Alesina and Perrotti, 1994; Barro, 1991). These studies constantly find the negative correlations between coups and economic growth. However, there is no consensus that coups have uniform economic implications in literature. For example, there is widespread disagreement on the sign of the relationship between political instability and investment; some studies show that coups are a negative impact on total investment; others do not have a statistically significant relationship, and yet others have a positive, causal relationship. This paper differs from this approach by examining the economic effects of coup attempt and coup d’état comparatively not only as a form of political instability but also as a form of social and economic instability.

The rest of this paper is organized into four main section as follows. Section-2 overviews the coup and coup d'état in general. Section-3 details the dataset and methodology used in the empirical study and empirical results were discussed as well. Last section gives concluding remarks.

2. Overview of Coup d'états and Coup Attempt

A great majority of the coups and coup attempts that have taken place since 1950 have occurred in Africa and Latin America as can be seen from the Table-1. Indeed, looking at the Table-13 in Appendix, it can be seen that most of countries experienced coup attempts or a coup d'état are in these two regions. In fact, almost all of the countries in the African continent can see either a coup attempt, or a coup d'état.

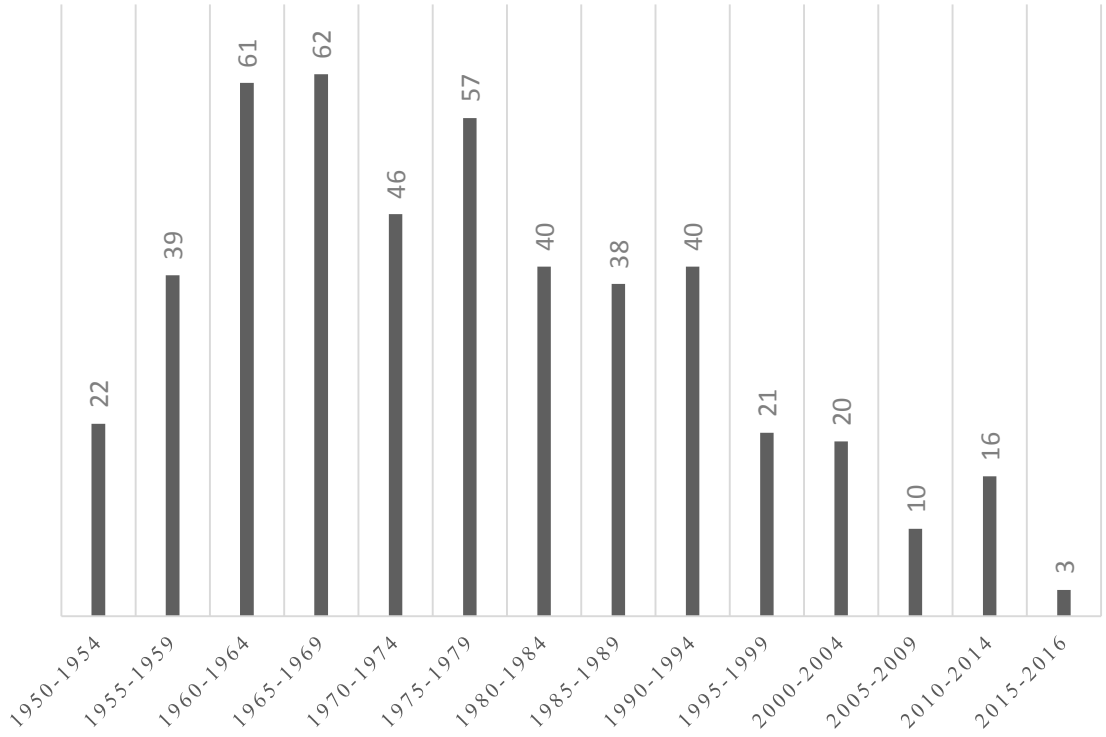
Table-1: Coup d'état and coup attempt, by region

Regions	coup attempt		coup d'état		coup attempt & coup d'état	
	number	%	Number	%	number	%
Africa	104	43.5	101	42.8	205	43.2
Asia	29	12.1	36	15.3	65	13.7
Europa	8	3.3	8	3.4	16	3.4
Latin America	76	31.8	70	29.7	146	30.7
Middle East	22	9.2	21	8.9	43	9.1
Total	239	100.0	236	100.0	475	100.0

Source: Powell et al., 2012

As can be seen from the Figure-1 indicates all coups and its attempts in 5-year periods, we see that the numbers of coups attempts and coups d'état increase in certain periods. Especially between 1960 and 1975, a large number of coups and coup attempts have taken place. In the process, a number of coup and coup attempts took place in Latin America and the African states that survived the special colonization.

Figure-1: Coup d'état and coup attempts in 5 year periods



Source: Authors own calculation from Powell et al., 2012

Since 2010, there have been 10 coup attempts in the world, while 9 coups have taken place. The countries that are involved in the coup attempts in this period are: Guinea-Bissau, Madagascar, Guinea, Mali, Sudan, Papua New Guinea, Lesotho, Burkina Faso, Burundi and Turkey. Countries experiencing a coup d'état include: Niger, Egypt, Guinea-Bissau, Mali, Maldives, Ukraine, Burkina Faso and Thailand.

The common features of these countries, which are exposed to the coup or coup attempt, are developing countries and all the coup d'états take place while political and economic stability emerged in these countries. Looking at Table-4, it can be seen that there are few coup attempts and coup attempts in the developed countries. For example, there are eight coups and eight coup attempts in the European countries, which are the developed country group. This is only 5 percent of the total coup d'états and coup attempts over world. But, in this paper it is aimed to analyze the economic impact of July 15 coup attempt comparing with the others in Turkey.

Since Turkey moved to multi-party system in 1950, it is faced 21 May 1960 and 12 September 1980 coups d'états, and 15 July coup attempt. In addition to coups, Turkey suffered from 12 March 1971 and 27 April 2007 coups by memorandum and the "28 February Process," which named as the "Postmodern Coup". The Government of Menderes, which ruled democratically for the first time in 1959, was constantly criticized by the Republican People's Party. So much so that these criticisms brought about the discussion of secularism and the idea of owning Atatürk's heritage was raised by the military administration. Prime Minister Adnan Menderes were executed together with

his two Ministers[1] with the revolt made by military junta. After this revolution, this coup in Turkey is a first feature in terms of opening door for the others.

When we look at the economic indicators from the transition to the multi-party system until the May 27, 1960 coup (ie, the period of Adnan Menderes), we can say that there is economic stability and the level of wealth increases. According to the Table-2, Turkey increased its gross domestic product (GDP) in this period and grew by 5.5% per year. Undoubtedly, in the face of this growth, the average prices have increased by 9.7% per year and the average balance of payments has been -25.2 million USD per year. Moreover, as can be seen from Table-2, the share of total investments in GNP during the Menderes period was 9.6% in 1950, 14.3% in 1955. Despite the decrease in growth trend in 1960, it increased to 16%. There was also a significant increase in agricultural credits during the period. Agricultural credits, which was 412 M TL in 1950, reached to 2,392 MTL in 1960 even though the rate of increase towards the end of the period was slow (Yücel, 2001; Kepenek ve Yentürk, 2005). It is evident that the coup was carried out in a positive direction with economic stability. It is clear that the 1960 coup d'état was not necessary for economic stability but it was carried out for the sake of its own purposes and interests of some political interest holders.

Table-2: Economic and Social Indicators for Turkey (1950-1960)

	GDP, $ US mil.	GDP Percentage Change (at 1998 prices)	Balance of payment, $ US mil.	Istanbul Cost of Living Index, %	Investment/ GNP, %	Agricultural Credits, TL mil.
1950	6,724	16.4	-42		9.6	412
1951	8,111	-5.0	-32	-2.3	10.3	646
1952	9,318	9.4	42	6.6	12.8	1,067
1953	10,844	11.2	-1	3.0	12.4	1,213
1954	11,073	-2.9	-6	8.2	14.7	1,497
1955	13,313	8.1	11	6.3	14.3	1,558
1956	15,358	3.3	-98	14.9	13.4	1,888
1957	20,451	7.9	-64	12.9	13.2	2,108
1958	24,383	4.6	-72	13.4	14.0	2,161
1959	30,465	4.6	-26	27.7	15.6	2,313
1960	19,319	2.9	10	6.1	15.9	2,392
Average		5.5	25,2	9.7	17.6	1,567

Source: Ministry of Development (MoD), 2017

After 20 years from the 1960 coup d'état, the 1980 military coup d'état took place as a second coup d'état in Turkey. Failures of parliamentary democracy, political terrorism, economic crisis and changes in the international political context are the main factors causing the coup.

By the end of the 1970's, severe economic crises experienced in Turkey. It can be argued that it was probably an economic crisis that had more influence than the social unrest and street violence that led to serious instability in political life in the late 1970s (Zurcher, 2004). According to Table-3 during the first years of the 1970s, inflation was running at around 20% a year and then it raised to 94% in 1979 due to rising oil prices after two oil crises and printing of money. Simultaneously, growth slowed down significantly, percentage change of real GDP was -2,4% in 1980. This growth rate, unfortunately, was the slowest growth rate since 1950. On the other hand,

[1] Minister of Foreign Affairs Fatin Rüştü Zorlu and Minister of Finance Hasan Polatkan

Turkish living standards did not increase too much between 1975 and 1978: reel income per capita fell by 5.8% from 1978 to 1980 (Krueger and Aktan, 1992).

Since the 1980 coup, the military has sought to avoid the resignation of a democratically elected government twice. He once forced the coalition led by Erbakan-Ciller to resign in 1997 and once in 2007 he wanted to overthrow the Erdogan government but failed.

Table-3: Economic and Social Indicators for Turkey (1975-1980)

	GDP, $ M	GDP Percentage Change (at 1998 prices)	Balance of payment, $ US, mil.	Istanbul Cost of Living Index, %
1975	62,227	7.2	1,672	21.2
1976	71,224	10.5	1,727	17.4
1977	81,468	3.4	2,129	26.0
1978	89,073	1.5	1,291	61.9
1979	108,837	-0.6	1,155	63.5
1980	90,679	-2.4	1,302	94.3
Average	83,918	3.3	1,546	47.4

Source: Ministry of Development (MoD), 2017

The years of 1990 have been overtaken by years of political instability with the coalition governments in Turkish political history. In 1999 and 2000, the Turkish economy was exposed to two serious crises because of political instability. High inflation, high external borrowing and high budget deficits have emerged as the main problems of the economy. After these two crises, the 2002 parliamentary elections resulted in some political parties failing to provide representation in the national legislature and starting a new era in the political history of the Turkey. The Justice and Development Party (AK Party) won the elections and launched a series of reforms in politics and the economy.

Table-4: Economic and Social Indicators for Turkey (2003-2016)

	GDP per capita, $	Econ. growth rate, %	Exports / Imports, %	CPI**, %	Unemp. rate, %	Interest Rate***, %
2003	4,698	5.3	68.1			27.4
2005	7,304	8.4	62.9	7.7	9.5	16.7
2007	9,666	4.7	63.1	8.4	9.2	17.8
2009	8,980	-4.8	72.5	6.5	13.1	8.4
2011	11,205	8.8	56.0	10.5	9.1	11.2
2013	12,480	4.2	60.3	7.4	9.0	9.1
2015	11,013	6.1	69.4	8.8	10.3	11.6
2016	10,807	2.9	71.8	8.5	10.9	11.4

*Gross fixed investment ** Consumer price index, (2003=100) *** TL deposit interest rate
Source: Ministry of Development (MoD), 2017 and Turkstat, 2017

High inflation fell to below 10 percent in this period and real interest rates (nominal interest rate rate minus inflation rate) also fell below 10 percent due to the fiscal discipline program implemented by the AK party government. This program also increased the consumption and

investment values which cause economy to accrete. The economy, which grew by about seven percent in the 2002-2007 period, contracted in 2009 with the impact of the global crisis, but the recovery was fast. In 2011, the economy grew by nine percent. Unemployment rate declined to pre-crisis levels (9.1%). Economic performance, which was realized in economic growth in the period of 2003-2016, also increased the national income per capita about 2.5 times. While the per capita GDP amounted to $4,698 in 2003, this amount went up to 10,808 in 14 years. However, per capita income remained at this level and national income did not increase in recent years. In particular, given the economic growth performance of Turkey in the last 14 years, increasing prosperity, increased economic relations with the countries of the region, and the ability to attract foreign investment, it is clear that this coup attempt is not due to the economic instability but it is threat to Turkey's future in economic and political stability entirely.

The conflict between president Erdoğan and Gülen was put into operation in numerous military and civil servant positions until the beginning of 2013. In the last three years, tension between the AKP government and the Gülenists named as "parallel" has increased. As a result, the government has stepped away from the gradual and occasional military and civilian duties of Gülen's supporters, even before the coup. The coup was planned and carried out by a small group of military officers within FETO terrorist organization. Officers have not played a key role in his failure, as did president Erdogan's ability to get Turkish citizens into the streets. Thus, July 15 coup attempt took its place in history as a repressed coup bythe people.

3. Data and Methodology

In order to analyze the effect of coups and coup attempts on the Turkish economy, both yearly and daily data for econometric analysis is used in this paper. Purpose of this study is to reveal the effect of coups in 1960 and 1980, and to compare these coups with the 2016 coup attempt.

3.1. Data

The data for the econometric analysis is compiled from Ministry of Development (MoD) and Central Bank of the Republic of Turkey (CBRT). The definition of variables used in this analysis is presented in Table-5. To analyze the 2016 coup attempt on macro-economic variable, namely on GDP, it is necessary to have afterwards data. For this reason, the projection values of GDP should be used and they are obtained from Medium-Term Program (2017-2019).

Table-5: Definition of Variables

Variable	Definition	Source
YEARLY ANALYSIS		
LNGDP	Logarithm of Gross Domestic Product (GDP)	Economic and Social Indicators from MoD for 1923-2016 period "Medium-Term Plan" from the MoD for the projection values (2017-2019)
GDPDEF	GDP Deflator	Economic and Social Indicators from MoD for 1923-2016 period "Medium-Term Plan" from the MoD for the projection values (2017-2019)
COALITION	Coalition	It takes 1 for the coalition years and 0 otherwise
D60	Dummy for 1960 coup	It takes 1 for 1960 and 0 otherwise
D60L	Dummy for 1960 coup afterwards	It takes 1 for 1960 afterwards including 1960 and 0 otherwise
D80	Dummy for 1980 coup	It takes 1 for 1980 and 0 otherwise
D80L	Dummy for 1980 coup afterwards	It takes 1 for 1980 afterwards including 1980 and 0 otherwise
D16	Dummy for 2016 coup attempt	It takes 1 for 2016 and 0 otherwise
D16L	Dummy for 2016 coup attempt afterwards	It takes 1 for 2016 afterwards including 2016 and 0 otherwise
DAILY ANALYSIS		
DOLLAR	Dollar purchase rate	CBRT
INTEREST	CBRT Weighted average funding cost	CBRT
BIST100	Istanbul Stock Market (BIST) 100 Price Index (1986=1)	CBRT
DUM1	Dummy for 15 July 2016	It takes 1 for 15 July 2016 and 0 otherwise
DUM2	Dummy for 15 July 2016 afterwards	It takes 1 for 15 July 2016 afterwards including 2016 and 0 otherwise

3.2. Methodology

The main purpose of this study is to reveal the effect of coups on the Turkish economy. The last coup attempt accrues less than a year ago. The econometric analysis with yearly data will help us to compare the 1960 and 1980 coups with 2016 coup attempt. The primary effect of coup attempt on GDP is going to be seen on the following years. Due to this reason, the projection values of GDP are used. The econometric analysis with the daily data will reveal the impact of 2016 coup attempt on US dollar rate, interest rate and stock market price index.

The linear regression analysis is done with Ordinary Least Square (OLS) estimation. To test our hypothesis, dummy variables for both short and long term effect is used for both data sets.

The model for the yearly data is as follows;

$$Y = \alpha_0 + \alpha_i \sum_{i=1}^{n} X + u \quad (1)$$

$$Y = \alpha_0 + \alpha_i \sum_{i=1}^{n} X + \delta_1 D_1 + \delta_2 D_2 + u \quad (2)$$

where Y is the dependent variable, i.e. logarithm of GDP, and X is the set of independent variables which are explain the changes in the dependent variable. D_1 is the dummy variable which takes 1 for only the coup year, 0 otherwise whereas D_2 is the dummy variable which takes 1 for the years that are following the coup (including the year of the coup). D_1 capture the short-term effect of the coup while D_2shows the long-term one. u refers to the error term which follows a normal distribution with zero mean. In this study, as our main focus is on the coups, the set of X is defined as political instability and social unrest. The sum of unemployment and inflation is used as a proxy for social unrest in the literature (Alesina et al., 1996). As the unemployment data starts from 1967, inflation,

i.e. GDP deflator, is used alone to demonstrate social unrest. Coalition periods are used as a proxy for the political instability for Turkey.

The model for the daily data is as follows;

$$Y_j = \beta_0 + \beta_i \sum_{i=1}^{n} X + u \qquad \text{j=1,2,3} \qquad (3)$$

$$Y_j = \beta_0 + \beta_i \sum_{i=1}^{n} X + \phi_1 D_1 + \phi_2 D_2 + u \qquad \text{j=1,2,3} \qquad (4)$$

Where Y indicates three dependent variables, i.e. dollar rate, interest rate and stock market price index. X is the lag values of the dependent variable. Lag selection is determined for each variable by using several lag selection criteria. D_1 is the dummy variable which takes 1 for only the coup attempt date (15 July 2016), 0 otherwise whereas D_2 *is* the dummy variable which takes 1 for the dates that are following the coup attempt. u is error term which follows a normal distribution with zero mean.

4. Results

Two separate econometric analyses done with two different data set. Yearly data set starts from 1923 to 2019. Daily data set commerce from the beginning of 2016 to end of February 2017 with 285 observations. In both econometric analysis, dummy variable for the coup dates are used to reveal the short and long term effects of the coups.

4.1. Econometric Analysis with Yearly Data for the Coups

The yearly data is constructed from Economic and Social Indicators at MoD from 1923 to 2016. To analyze the influence of 2016 coup attempt, it is necessary to have the data after the shock. For this reason, the projection values for the years 2017 to 2019 from "Medium Term Plan (2017-2019) is used. The summary of the variables can be seen from Table-6.

Table 6: Summary Statistics

Variable	Number of observations	Mean	Std. Dev.	Min.	Max
YEAR	97	1971	28.146	1923	2019
LNGDP	97	9.014	7.429	0.621	21.818
GDPDEF	96	22.076	28.511	-25.41	106.45
COALITION	97	0.255	0.438	0	1
D60	97	0.010	0.101	0	1
D60L	97	0.623	0.487	0	1
D80	97	0.010	0.101	0	1
D80L	97	0.418	0.496	0	1
D16	97	0.010	0.101	0	1
D16L	97	0.051	0.221	0	1

The coups are like shocks which have short-term influence. 40 year periods are used for econometric estimation to be able to compare the coup terms. Table-7 shows the robust panel data estimation for three periods; namely 1960-1979, 1980-1999 and 2000-2019. Each period has the same observation number with four set of regressions. First regression is without the coup dummies. The second one has only the short-term effect coup dummy while third one has the long-term one alone. The fourth one involve both coup dummies.

GDP deflator has a positive and significant value for the 1960 -1979 period. The coefficient of COALITION is negative and significant for the 2000-2019 while insignificant for the other periods. 1960-1979 period in Turkey is known to be low political stability with coalitions. The variable was expected to be significant with a negative sign for this period. Short term coup dummies are significant with a negative sign for three periods while long term one is insignificant. The size of dummies is highest for the first period while the lowest for the third period. Coup and coup attempts have significant short term influence. The effect of 2016 Coup attempt is one tenth of 1960 and one fifth of 1980.

The results for 1923-2019 and 1940-2019 periods could be found at Appendix Table-14 and Table-15, respectively. All the results are consistent with one main difference which is that in the longer term (1923-2019 or 1940-2019) the impact of 1980 coup is permanent.

Table-7: Robust Panel Data Estimation

VARIABLES	(1) LNGDPD	(2) LNGDPD	(3) LNGDPD	(4) LNGDPD	(5) LNGDPD	(6) LNGDPD	(7) LNGDPD	(8) LNGDPD	(9) LNGDPD	(10) LNGDPD	(11) LNGDPD	(12) LNGDPD
PERIOD	1940-1979	1940-1979	1940-1979	1940-1979	1980-1999	1980-1999	1980-1999	1980-1999	2000-2019	2000-2019	2000-2019	2000-2019
L.LNGDPD	0.951***	0.981***	0.955***	0.967***	0.976***	0.944***	1.013***	0.973***	0.972***	0.974***	0.974***	0.974***
	(0.0429)	(0.0345)	(0.0411)	(0.0402)	(0.0550)	(0.0587)	(0.0734)	(0.0787)	(0.0370)	(0.0378)	(0.0395)	(0.0401)
GDPDEF	0.00680***	0.00652***	0.00676***	0.00665***	0.000892	0.00221	0.00120	0.00234	0.000281	0.000268	0.000270	0.000267
	(0.00105)	(0.00112)	(0.00103)	(0.00108)	(0.00240)	(0.00270)	(0.00230)	(0.00269)	(0.00157)	(0.00159)	(0.00159)	(0.00161)
COALITION	0.00506	-0.0423	0.0124	-0.0749	-0.0153	-0.0103	-0.0400	-0.0283	-0.138**	-0.138**	-0.138**	-0.138**
	(0.0919)	(0.0835)	(0.113)	(0.0817)	(0.0618)	(0.0619)	(0.0780)	(0.0779)	(0.0584)	(0.0591)	(0.0592)	(0.0601)
D60		-0.482***		-0.512***								
		(0.0420)		(0.0429)								
D60L			-0.0143	0.0579								
			(0.0954)	(0.0628)								
D80						-0.317***		-0.296**				
						(0.116)		(0.126)				
D80L							-0.102	-0.0726				
							(0.0984)	(0.0976)				
D16										-0.0601*		-0.0589***
										(0.0308)		(0.0122)
D16L											-0.0163	-0.00146
											(0.0434)	(0.0428)
Constant	0.797	0.334	0.739	0.540	0.467	0.979	-0.144	0.509	0.638	0.604	0.597	0.601
	(0.688)	(0.569)	(0.661)	(0.649)	(0.904)	(0.957)	(1.194)	(1.276)	(0.756)	(0.770)	(0.799)	(0.810)
Observations	40	40	40	40	40	40	40	40	40	40	40	40
R-squared	0.956	0.964	0.956	0.964	0.966	0.968	0.966	0.968	0.975	0.975	0.975	0.975

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4.2. Econometric Analysis with Daily Data for 2016 Coup Attempt

To analyze the effect of the coup attempt in 15 July 2016, six months before and after data is used for the econometric analysis. The data starts from beginning of 2016 (04.01.2016) to 20 February 2017 with 287 observations. Summary statics of the variables can be seen at Table-8.

Table-8: Summary Statistics

Variable	Number of observations	Mean	Std. Dev.	Min.	Max.
DOLLAR	287	3.109	0.293	2.793	3.878
INTEREST	287	8.508	0.643	7.73	10.39
BIST100	287	78026.26	4252.446	68567.89	88830.41
DUM1	287	0.0035	0.059	0	1
DUM2	287	0.530	0.499	0	1

Four selection criteria are used for choosing the optimum lag for the dependent variables for the equation (3) and (4): Final prediction error (FPE), Akaike's information criterion (AIC), Schwarz's Bayesian information criterion (SBIC), and the Hannan and Quinn information criterion (HQIC). The results of the lag selection can be seen at Table-9. HQIC which gives the shortest lag order is chosen for lag selection criteria.

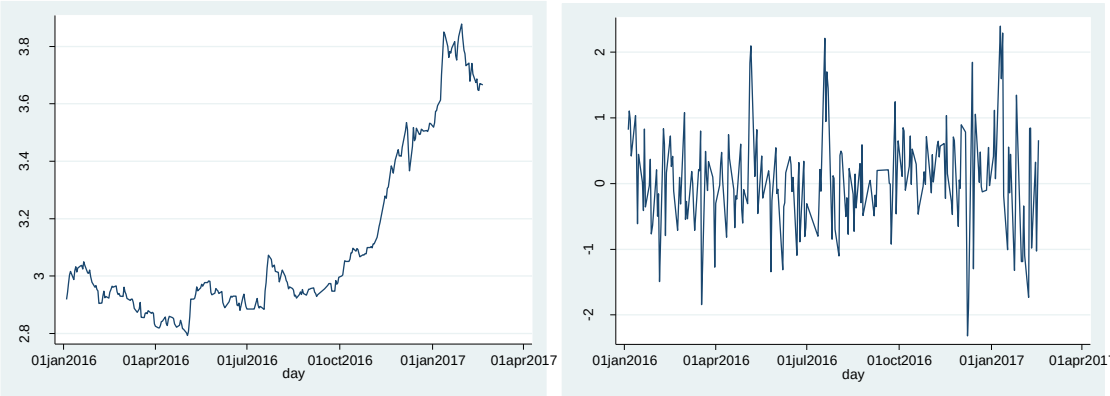
Table-9: Lag Selection for the Variables

	DOLLAR	INTEREST	BIST100
FPE	3	6	9
AIC	3	6	9
SBIC	3	2	1
HQIC	2	2	1

As the variables are time series, autocorrelation problem is inevitable. White heteroscedasticity test also indicates a problem. To solve the problem of autocorrelation, lag of the variables are used while to overcome the heteroscedasticity problem, robust estimation is utilized.

In Figure-2 panel A shows the daily change of dollar rate while Panel (B) indicate first difference of the variable. After October 2016, there is a steep increase in the dollar rate.

Figure-2: Time series (Panel A, in left) and first difference (Panel B, in right) of DOLLAR



Robust OLS estimation results for equation (3) and (4) for the dollar rate can be found in Table-10. Short and long term dummies are added separately to basic regression. In the last estimates both dummies are included to the equation. The short-term effect of the coup attempt is negative and significant while the long-term one is positive and significant.

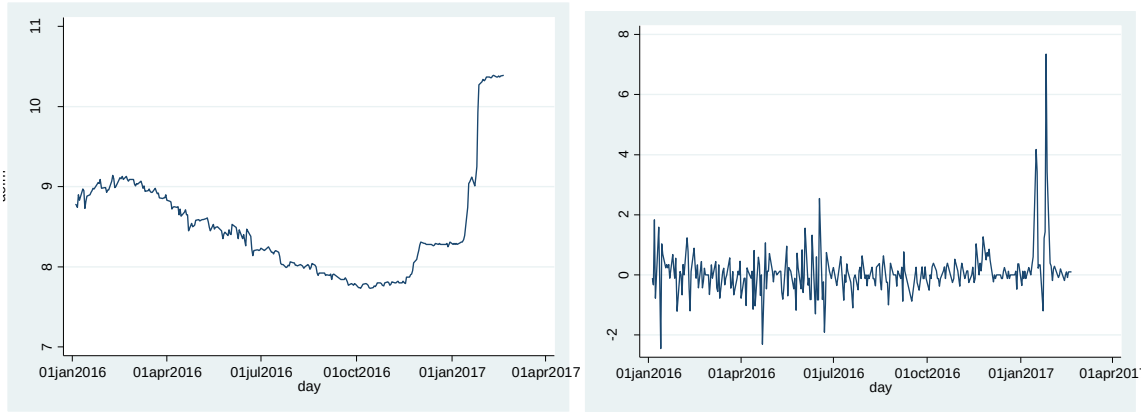
Table-10: Robust OLS Estimation for Dollar

VARIABLES	(1) DOLLAR	(2) DOLLAR	(3) DOLLAR	(4) DOLLAR
L.DOLLAR	1.189***	1.189***	1.176***	1.176***
	(0.0859)	(0.0861)	(0.0874)	(0.0875)
L2.DOLLAR	-0.188**	-0.189**	-0.182**	-0.182**
	(0.0862)	(0.0864)	(0.0868)	(0.0869)
DUM1		-0.00649***		-0.0112***
		(0.00150)		(0.00262)
DUM2			0.00667**	0.00685**
			(0.00298)	(0.00301)
Constant	-0.000270	-6.34e-05	0.0178	0.0186
	(0.0201)	(0.0202)	(0.0228)	(0.0229)
Observations	285	285	285	285
R-squared	0.994	0.994	0.994	0.994

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In Figure-3, Panel A shows the daily change of interest rate while Panel (B) indicate first difference of the variable. The interest rate is slowly decreasing from February 2016 to October 2016. After November 2016, interest rate fluctuates and it is observed that it increased drastically.

Figure-3: Time series (Panel A, in left) and first difference (Panel B, in right) of INTEREST



Robust OLS estimation results for equation (3) and (4) for the interest rate can be found in Table-11. The first regression is without the influence of the coup attempt. The second and third regression includes the short and long term dummies separately. In the last one both is added to the equation. Short term effect of the coup attempt is insignificant although the long term one positive and significant.

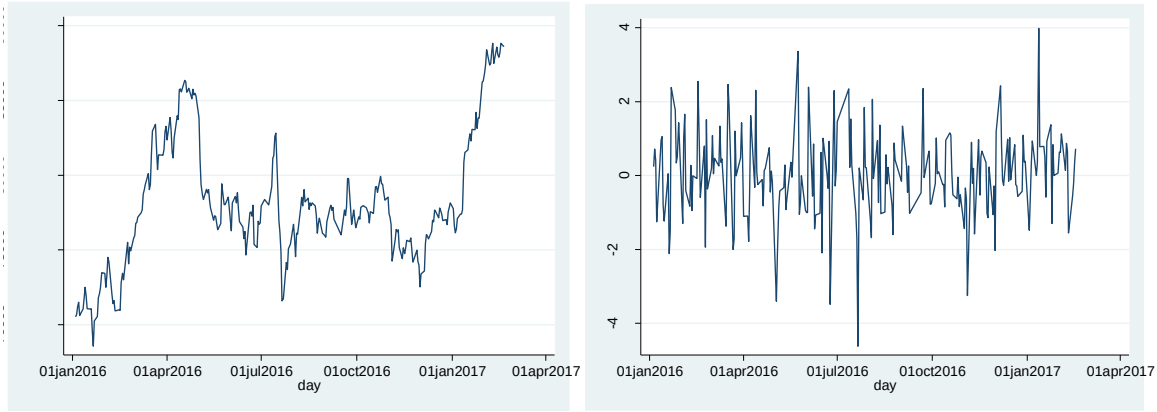
Table-11: Robust OLS Estimation for Interest Rate

VARIABLES	(1) INTEREST	(2) INTEREST	(3) INTEREST	(4) INTEREST
L.INTEREST	1.225***	1.225***	1.204***	1.204***
	(0.123)	(0.124)	(0.121)	(0.121)
L2.INTEREST	-0.221*	-0.221*	-0.194	-0.194
	(0.122)	(0.123)	(0.120)	(0.120)
DUM1		0.000223		-0.00635
		(0.00551)		(0.00661)
DUM2			0.0189**	0.0189**
			(0.00889)	(0.00893)
Constant	-0.0309	-0.0309	-0.0855	-0.0854
	(0.0383)	(0.0384)	(0.0545)	(0.0546)
Observations	285	285	285	285
R-squared	0.988	0.988	0.989	0.989

Robust standard errors in parentheses0,,,0,,,
*** p<0.01, ** p<0.05, * p<0.1

In Figure-4, Panel A shows the daily change of stock market price index while Panel (B) indicate first difference of the variable. The index is higher in April 2016 and drastically falls and fluctuates till January 2017. After January 2017, it increases steeply.

Figure 4: Time series (Panel A, in left) and first difference (Panel B, in right) of BIST100



At Table-12, it can be seen the robust OLS estimation results for equation (3) and (4) for the stock exchange price index. Short and long term dummies added to the estimation separately. In the last estimate, the both dummies are included. The short-term effect of the coup attempt is positive and significant while there is no long-term influence.

Table-12: Robust OLS Estimation for Istanbul Stock Exchange Price Index

VARIABLES	(1) BIST100	(2) BIST100	(3) BIST100	(4) BIST100
L.BIST100F	0.978***	0.977***	0.978***	0.978***
	(0.0138)	(0.0139)	(0.0139)	(0.0140)
DUM1		278.0***		292.4***
		(92.37)		(107.1)
DUM2			-32.58	-34.31
			(117.8)	(118.3)
Constant	1,817*	1,835*	1,805*	1,824*
	(1,074)	(1,080)	(1,077)	(1,083)
Observations	286	286	286	286
R-squared	0.945	0.945	0.945	0.945

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4.3 Comparative interpretation of results

Two separate econometric analyzes were carried out using both annual and daily data. In the annual analysis, the main objective is to compare the effects of 1960, 1980 coups and 2016 coup attempt on GDP, the most important macroeconomic variable,. For this, it was tested whether there was any impact on GDP by using a dummy variable to measure the short and long-run effect for the years of impact or not. The variables of "political instability" and "social unrest" were used as determinants of GDP. For political instability, a dummy variable was created for the coalition years. In the literature, social unrest is measured as the sum of unemployment and inflation. Since the unemployment data started in 1967, only inflation, the GDP deflator, was used as the social unrest indicator. Estimates were made over 40 years to compare periods. As a result, in the annual analysis, it is found that the significant of the impacts were at most 1960, then 1980 and at least 2016, respectively. The effect of the 2016 coup attempt is one tenth of 1960 coup, and one fifth of 1980 coup.

15 July 2016 coup attempt has been analyzed using daily data to test whether the exchange rate, interest rate and stock market impact is in the form of shock or permanent or not. US dollar buying rate, CBT weighted funding cost and BIST100 price index is used as an indicator for exchange rate, interest rate and stock market, respectively. To make comparison between the periods, the data starts 6 months before and 6 months after the coup attempt. As a result, the July 15 coup attempt led to a permanent increase in the long term (6 months), despite a short-term (daily) decline in the exchange rate. Despite the fact that the interest rates do not have a short-term effect, it has statistically significant increase in the period following the coup attempt. On the stock exchange price index, there is only a short-term positive impact.

As a result, the July 15 coup attempt has had little or even short-term negative impact on GDP shown with annual econometric analysis. In daily analysis, the short-term (immediate or daily) effect is decrease in the exchange rate and an increase in the stock market price index. In the long run (6 months) both the exchange rate and the interest rates have increased permanently.

5. Conclusion

It is clear that the July 15 coup attempt has emerged as an illegal attempt against the republic of Turkey of supreme intelligence supported by the establishment of a parallel state that has no social bases. It was initiated to overthrow a government which is a people's support. Its basic character, design, structure and implementation process differ fundamentally from the previous 1960s and 1980s coups d'état. The first and foremost disparity of the July 15 coup attempt can be considered a political and economic coup attempt without a political and economic reason for Turkey's political and economic stability, which has been going on for a long time. An important difference of this coup that you are comparing is that they are members of a religious group of coup. For the first time a community emerges behind a coup instead of military group. However, religious communities or groups must have been formed in order for the religious life of the society to live in a more healthy way.

The coup attempt can not be explained by the desire of the post to satisfy only their personal ambitions and to obtain authority. Because the majority of those in the military wing of the coup are those who have already come to the highest authorities or will be able to come in the normal procedure. In fact, many of them were favored by the congregation and brought to these authorities even though they were not in a position to deserve the places they came from. Perhaps the most important factor in their coming to these missions is that they are congregations, so they have legitimately considered such a takeover and have taken part in it.

The coup attempt is a great assault against the existence of Turkey, not just against Turkey and Turkey's administrators. In failure of the coup attempt, the share of the active use of communication networks and social media is overwhelming. Individuals and social groups can now be exposed to irrationality and drive because they have the ability to be informed quickly through social media. Considering that the control of all media from one to several points can be achieved in Turkey during the traditional radio and single channel television broadcasting until the middle of 1980s, it is understood that the 1960s and 1980s coups are a great advantage in directing public opinion towards coup aims and ensuring community control. However, it may not be possible to take full control of news sources in the age of information technologies, web-based, multi-centered, multi-source media and communication. In this coup attempt, media and communication tools have made an important contribution to the movement of people and society against the coup attempt and to the prevention of the coup attempt.

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Appendix

Table-13: Coup d'état and coup attempt, by country

Country	Coup attempts	Coups	Total	Country	Coup attempts	Coups	Total
Afghanistan	1	4	4	Lesotho	1	3	4
Algeria	2	2	4	Liberia	3	1	4
Angola	1	0	1	Libya	2	1	3
Argentina	13	7	20	Madagascar	3	1	4
Azerbaijan	2	0	2	Maldives	0	1	1
Bangladesh	3	3	6	Mali	3	3	6
Benin	2	6	8	Mauritania	2	5	7
Bolivia	12	11	23	Morocco	2	0	2
Brazil	2	4	6	Mozambique	1	0	1
Burkina Faso	1	7	8	Myanmar	1	3	4
Burundi	6	5	11	Niger	2	4	6
Cambodia	1	2	3	Nigeria	2	6	8
Cameroon	1	0	1	Oman	0	1	1
Central African Republic	1	4	5	Pakistan	0	4	4
Chad	6	1	7	Panama	3	2	5
Chile	1	1	2	Papua New Guinea	2	0	2
Colombia	2	2	4	Paraguay	2	2	4
Comoros	5	4	9	Peru	4	4	8
Congo	4	3	7	Philippines	5	0	5
Cuba	1	1	2	Portugal	3	1	4
Cyprus	0	1	1	Qatar	1	2	3
D. Republic of the Congo	2	2	4	Rep. of Vietnam	3	4	7
Djibouti	1	0	1	Russia	1	0	1
Dominica	1	0	1	Rwanda	0	2	2
Dominican Republic	2	2	4	Sao Tome and Principe	1	1	2
Ecuador	6	5	11	Senegal	1	0	1
Egypt	0	4	4	Seychelles	0	1	1
El Salvador	1	3	4	Sierra Leone	5	5	10
Equatorial Guinea	1	1	2	Somalia	2	1	3
Ethiopia	3	2	5	South Korea	0	1	1
Fiji	0	3	3	Spain	1	0	1
Gabon	1	0	1	Sudan	10	4	14
Gambia	2	1	3	Suriname	0	2	2
Ghana	5	5	10	Swaziland	0	1	1
Greece	1	2	3	Syria	3	8	11
Grenada	0	2	2	Thailand	4	8	12
Guatemala	5	5	10	Togo	4	3	7
Guinea	3	2	5	Tunisia	0	1	1
Guinea Bissau	4	4	8	Turkey	3	3	6
Haiti	4	9	13	Uganda	2	4	6
Honduras	4	6	10	Ukraine	0	1	1
Indonesia	1	1	2	United Arab Emirates	2	0	2
Iran	0	1	1	Uruguay	0	2	2
Iraq	8	4	12	Venezuela	13	0	13
Ivory Coast	3	1	4	Yemen (North Yemen)	2	3	5
Jordan	2	0	2	Yemen (South Yemen)	2	2	4
Kenya	1	0	1	Zambia	3	0	3
Laos	5	3	8				
Lebanon	2	0	2				
				Total	239	237	475

Source: Powell et al., 2012

Table-14: Robust Panel Data Estimates for 1923-2019 period

	(1)	(2)	(3)	(4)	(5)
VARIABLES	LNGDPD	LNGDPD	LNGDPD	LNGDPD	LNGDPD
L.LNGDPD	0.985***	0.980***	1.012***	0.982***	1.008***
	(0.00890)	(0.0145)	(0.0166)	(0.0105)	(0.0190)
GDPDEF	0.00214*	0.00204*	0.00325***	0.00224*	0.00343***
	(0.00114)	(0.00115)	(0.00112)	(0.00119)	(0.00119)
COALITION	-0.0730	-0.0875	-0.125**	-0.0700	-0.161***
	(0.0567)	(0.0567)	(0.0582)	(0.0572)	(0.0582)
D60		-0.529***			-0.613***
		(0.0391)			(0.0506)
D60L		0.0284			0.0613
		(0.0704)			(0.0686)
D80			-0.432***		-0.450***
			(0.0741)		(0.0741)
D80L			-0.144*		-0.189**
			(0.0784)		(0.0748)
D16				-0.0586***	-0.0572***
				(0.0119)	(0.0119)
D16L				0.0696	0.0620
				(0.0470)	(0.0448)
Constant	0.305**	0.377*	-0.112	0.340*	-0.0596
	(0.152)	(0.221)	(0.258)	(0.174)	(0.291)
Observations	96	96	96	96	96
R-squared	0.992	0.993	0.993	0.992	0.994

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table-15: Robust Panel Data Estimates for 1940-2019 period

VARIABLES	(1) LNGDPD	(2) LNGDPD	(3) LNGDPD	(4) LNGDPD	(5) LNGDPD
L.LNGDPD	0.981***	0.975***	1.023***	0.978***	1.021***
	(0.0124)	(0.0162)	(0.0236)	(0.0143)	(0.0264)
GDPDEF	0.00186	0.00172	0.00320**	0.00195	0.00335**
	(0.00117)	(0.00117)	(0.00133)	(0.00122)	(0.00140)
COALITION	-0.0720	-0.0875	-0.124**	-0.0694	-0.157**
	(0.0570)	(0.0562)	(0.0614)	(0.0574)	(0.0623)
D60		-0.546***			-0.613***
		(0.0415)			(0.0513)
D60L		0.0265			0.0539
		(0.0706)			(0.0689)
D80			-0.419***		-0.435***
			(0.0784)		(0.0784)
D80L			-0.168*		-0.214**
			(0.0925)		(0.0946)
D16				-0.0588***	-0.0564***
				(0.0120)	(0.0117)
D16L				0.0702	0.0464
				(0.0496)	(0.0459)
Constant	0.384*	0.490*	-0.294	0.429*	-0.267
	(0.226)	(0.265)	(0.393)	(0.253)	(0.436)
Observations	80	80	80	80	80
R-squared	0.988	0.989	0.989	0.988	0.990

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1