# SEARCHING FOR POLITICAL BUSINESS CYCLES IN TURKEY: FINDINGS FROM FISCAL POLICY

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**ABSTRACT**

In this study Traditional Opportunistic Political Business Cycle Theory was tested for the Turkish economy using series of public expenditure, other public transfer expenditure, tax revenues and budget deficit for the period 1987Q1-2002Q4. The reason for the use of these variables in the analysis is that these variables have often been used in analyses for fiscal policy at the macroeconomic level in the literature of Traditional Opportunistic Political Business Cycle Theory. In the determination of whether or not political opportunistic policies were observed in general elections held in the 1987Q1-2002Q4 period, *the "Seasonal Box-Jenkins Models"* that also used by Alesina, Cohen and Roubini (1992) for OECD countries and industrial countries was used in this study. Since the findings of the present study did not identify any political business cycles identified in other public transfer expenditure, public expenditure, tax revenue and budget deficit data, it could be concluded that Traditional Opportunist Business Cycles Theory is not valid for Turkey. In other words, government parties did not manipulate fiscal policies to win the elections in Turkey in the 1987-2002 period.

**Key Words:** The Traditional Opportunistic PBC Theory, Box-Jenkins Models, Fiscal Policy, Turkey.
**Jel Classification:** D72, E62, H62

## TÜRKİYE'DE POLİTİK KONJONKTÜR TEORİLERİNİN ARAŞTIRILMASI: MALİYE POLİTİKASINDAN BULGULAR

**ÖZ**

Bu çalışmada Geleneksel Fırsatçı Politik Konjonktür Teorisi Türkiye ekonomisi için çeyrek yıllık kamu harcamaları, diğer kamu transfer harcamaları, vergi gelirleri ve bütçe açığı verileri kullanılarak, 1987Q1-2002Q4 dönemi için test edilmiştir. Analizde bu verilerin kullanılma sebebi, makroekonomik düzeydeki Geleneksel Fırsatçı Politik Konjonktür Teorisi literatüründe maliye politikası analizinde çoğunlukla bu değişkenlerin kullanılıyor olmasıdır. Bu çalışmada 1987Q1-2002Q4 döneminde yapılan genel seçimlerde, politik fırsatçı politikaların gözlenip gözlenmediğinin belirlenmesinde Alesina, Cohen and Roubini (1992)'nin OECD ve endüstriyel ülkeler için kullandıkları "Mevsimsel Box-Jenkins Modelleri" kullanılmıştır. Çalışmada elde edilen sonuçlara göre söz konusu dönemde kamu harcamaları, vergi gelirleri, diğer transfer harcamaları ve bütçe açığı verilerinde politik konjonktür dalgalanmalarına rastlanmadığından, Geleneksel Fırsatçı Politik Konjonktür Teorisi Türkiye için geçerli değildir. Bir diğer deyişle Türkiye'deki iktidar partileri 1987-2002 döneminde yeniden seçim kazanabilmek için maliye politikasını manipüle etmemişlerdir.

**Anahtar Kelimeler:** Geleneksel Fırsatçı Politik Konjonktür Teorisi, Box- Jenkins Modelleri, Maliye Politikası, Türkiye

**Jel Sınıflandırması:** D72, E62, H62**.**

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### 1.   Introduction

Public choice theory is a discipline that adapts economic analysis tools and methods developed for detailed analyses in economics for public sector, political process, and politics. The theory, by utilizing "*homo economicus,*" one of the basic analysis tools of economics in the political field, proposes that the decision making units in the field are rational and try to maxiimize their interests. Thus, it asserts that the relationship based on self-interest between the voters, politicians and bureaucrats results in the violation of the border between politics and economics. Therefore, according to the public choice theory, when the governments that play a dominant role in economic life cause negative economic changes, the idea of "*failure of the state (government)*" is put on the agenda.

Proponents of the public choice theory believe that Keynesian economics that advocates that public interests are protected has a significant influence in the expansion of the economic role and the market interventions of the state. Thus, they consider that limitation of the power of the state would be the most effective solution in preventing the manipulation of economy and to rule out the economic and political degenerations induced by the enlargement of the state, a need for *constitutional restructuring* arises in political decision making process. Therefore, the destabilizing activities of individuals and politicians that aim to maximize their interests would be prohibited by constitutional rules and thus, political and economical deviations would be prevented.

One of the main areas of study of public choice theory, "*Political Business Cycle Theories,*" concentrates on the efforts of political parties during election periods to increase their votes and the negative effects of these efforts on the economy. *The starting point of the theory is the assumptions that the voters evaluate the performances of the governments based on economic conditions, and the governments that want to be reelected try to find ways to manipulate the economy to create economic conditions desired by the voters before the elections.* Therefore, based on this theory, government parties manipulate the economy to increase their chances of reelection. For this purpose, they follow policies that increase the demand to achieve rapid growth and low unemployment in the economy before the elections, while they tend to implement contractionary policies after the elections to remove the inflationist pressures created by the pre-election expansionist policies. Such interventions by the governments cause political business cycles during election periods.

The objective of the present study is to test Nordhaus' (1975) "*Traditional Opportunistic Political Business Cycles Theory,*" one of the political business cycle theories, based on the fiscal policy indicators for Turkey between 1987 and 2002. Thus, political business cycle theories would be discussed in the second section of the study, a literature review would be presented in the third, data and methodology of

the study would be explained in the fourth, and findings of the study would be examined in the fifth section. Finally, the results of the study would be discussed in the sixth section.

## 2. Political Business Cycles Theories

Pre-1980 political business cycle models developed through *two significant stages*. The first stage commenced with the traditional opportunistic model by Nordhaus (1975) in mid-seventees. Traditional opportunist political cycle approach was implemented by Nordhaus (1975) and MacRae (1977) (Alesina, 1987: 651). In an article, which had profound effects on the literature, Nordhaus (1975) formulated the traditional opportunistic political business cycles theory (Nordhaus, 1990: 4), and addressed the behavior of voters and politicians in a democratic political system instead of class struggle in his analysis of political business cycles (Erdoğan, 2004: 53). In Nordhaus' model, it was stressed that government parties are rational and opportunistic and the constituency decides based on the past performances, in other words the electorate has adaptive expectations (Nordhaus, 1990: 4). The fundamental hypothesis of this model is that the politicians try to manipulate the economy using the economic policies to be reelected (Alesina, Cohen ve Roubini, 1991: 1). Thus, government parties try to invigorate the economy in the pre-election period, benefiting from the unemployment and inflation trade-off in the Phillips curve, and assuming that the myopic voters would vote for them again (Saraç, 2005: 39).

The second stage commenced with the traditional partisan model of *Hibbs* (1977). These pre-rational expectations period models are based on *exploitable Philips curve relationship* and the assumption that Philips curve relationship is valid. Nordhaus' (1975) traditional political business cycles model anticipates fast growth and low unemployment during the pre-election period and increasing inflation and stagnation in the economy after the elections independent of the political orientation of the governments. On the other hand, Hibbs' (1977) partisan model focuses on the systematic and continues cycles in the inflation/unemployment combination induced by the economic parties with different ideologies. The most significant assumption of the 1950 – 1980 era was the electorate had adaptive, not rational expectations. Thus, the related period was christened as *pre-rational expectations period*, and the models where the electorate was assumed to be adaptive as opposed to rational were named as *traditional models* (Alesina and Roubini, 1990: 1).

Traditional political business cycle models that started to develop in mid-1970's impose upon the "opportunistic" or "partisan" intentions of policy makers (Alesina and Roubini, 1990: 1) and argue that government parties affect the macroeconomic outcomes systematically and predictably utilizing the exploitable Philips curve. The first type of such models was the "*opportunistic models.*" Opportunistic models developed by Nordhaus (1975), are based on the premise that, instead of implementing policies, which are a function of their own ideology, the politicians prefer

policies that would maximize their chances of reelection, hence acting in an "opportunist" manner (Alesina, Roubini, and Cohen, 1991: 1). The second traditional model was developed by Hibbs. Hibbs stressed that government parties with different ideological orientation implement different policies, and each party follows policies that are acceptable by its own electorate (Alesina and Roubini, 1990: 1). Thus, he stated that parties on the left prioritized unemployment problem as opposed to the increasing inflation costs, while parties of the right implement policies to fight against inflation in the expense of a higher unemployment rate (Erdoğan, 2004: 50). Hibbs' partisan model, contrary to Nordhaus, indicates the systematic and continuous variations in the unemployment/inflation combination (Alesina, Roubini, 1990: 1).

### 3.  Literature Review

Tutar and Tansel (2000) used budget deficit/GDP, other current/GDP, personnel expenditures/GDP, investments/GDP, and transfers/GDP annual data for 1960 – 1996; quarterly data for 1983 Q1 – 1997 Q2; and monthly data for 1990: 01 – 1997: 06 periods. As a result of their analysis, it was determined that there were no opportunistic political business cycles in annual data, while there were traditional opportunistic business cycles in quarterly and monthly data. According to the authors, the basic reason for that was the lack of an electoral effect on the annual budget, while probably it resulted in an inefficiency of seasonal budget expenditures and unexpected allowances, and deficiency in resource distribution (Tutar and Tansel, 2000: 25).

Telatar (2001) investigated whether there were traditional opportunistic political business cycles in real money supply and real public expenditures in Turkey for 1986 – 1997 period. Results obtained in that study demonstrated that Nordhaus' (1975) traditional opportunistic business cycle theory was valid for Turkey. In other words, government parties implemented expansionist total demand policies to be reelected via public expenditures and money supply during pre-election periods (Telatar, 2001: 59 – 66).

Onur (2001) tested whether traditional opportunistic business cycle theories were valid for 13 parliamentary elections held between 1950 and 2000. With adaptive expectations, opportunist politicians, and retrospective electorate assumptions, the study included variables such as GDP growth, unemployment rate, inflation rate, growth in currency in circulation, and consolidated budget deficit for policy outputs, and variables such as monetary growth, tax revenues, transfers, and government expenditures for policy tools. As a result, the study extrapolated certain evidence for traditional opportunistic business cycles theory in Turkey (Onur, 2001: 157 – 173).

Kuzu (2001) used CRBT balance sheet size, net domestic assets and monetary base, currency issued, money supply (M1), and public sector credits extended by CRBT series for monetary policy and public expenditure, public personal expenditure, tax revenues for fiscal policy, and finally agricultural credits data for agricultural policies for 1977 – 2001 period in Turkey. The study identified that Central Bank of Turkey did not allow for manipulation in the related variables. It was demonstrated

that Central Bank did not increase public sector credits during pre-election periods especially after 1998, however there were political business cycles in monetary policy indicators such as currency issued and M1. It was also determined that there were political business cycles in fiscal policy indicators, especially in tax revenues, and also in agricultural credits between 1964 – 1998 compatible with traditional political business cycle theories (Kuzu, 2001: 1 – 16).

Asutay (2004) tested whether traditional opportunistic political cycles theory was valid in 1980 – 2002 period in Turkey. For this purpose, the study utilized quarterly government expenditure, non-interest government expenditure, transfers to state economic enterprises, and public investment series for fiscal policy indicators, while it utilized money in circulation, money supply (M1), M2Y, and domestic credit series for monetary policy indicators. The study revealed strong evidence for traditional opportunist political cycle theories in Turkey (Asutay, 2004: 22 – 24).

Erdoğan and Bozkurt (2009) investigated whether governments in Turkey manipulated monetary policies during the elections between 1986 and 2005. They utilized monthly money supply (M1) series for the 1986: 12 – 2005: 03 period. They found that monetary policy was manipulated by the governments during the elections within the related period. It also means that traditional opportunistic political business cycle theories were valid for Turkey in that period (Erdoğan and Bozkurt, 2009: 208 – 215).

Kanca (2011) analyzed the evidence for the existence of traditional opportunistic political business cycles in Turkey during the 1987 – 2007 period. Kanca (2011) used GDP, unemployment, and inflation series for policy outputs, and public expenditures as the policy tools. It was determined as a result of the analysis that inflation demonstrated a tendency to increase and unemployment demonstrated a tendency to decrease during election periods, while policy tools analysis showed that public expenditures increased during election periods. The results identified that Nordhaus' traditional opportunistic business cycles theory was valid for Turkey (Kanca, 2011: 35).

### 4.　　Data And Methodology

In the present study that aimed to test the validity of political business cycles for election periods in Turkey, macroeconomic indicators of public expenditures, tax revenues, other public transfer expenditures, and budget deficit were used. The data set for the related macroeconomic variables was compiled from Central Bank of the Turkish Republic (CBTR) electronic data distribution system, General Directorate of Budget and Fiscal Control (GDBFC), and International Financial Statistics (IFS) data. The analysis was commenced with the year 1987, because it was the year of first democratic elections in the country. Until the transition to the multi-party system in Turkey, there was a single party political structure. Under one-party conditions, it is meaningless for the parties to implement populist policies to manipulate the economy. Between 1960 and 1980, military coups that occurred every decade interrupted the

democratic mechanisms continuously. After the 1980 coup d'état, the first elections were held in 1983. However, these elections were held in an antidemocratic environment under military coup conditions, which prevented prevalence of populist policies in this period (Aydemir, 2007: 1). Another reason for the selection of the initial year of the series as 1987 was due to the fact that healthy data was only available after that date. Public expenditure, other public transfer expenditure, tax revenue and budget deficit data were considered until the year 2002 due to the inconsistencies and breakages in the economy after this year since Turkey was transformed from consolidated budget to central budget definition in 2002. The variables used in the study are detailed below:

**PE:** Public Expenditure. Public expenditures series for 1987:Q1 – 2002:Q4 period was realized using 2003-based inflation (INF) series. Then the logarithm of the series was teken to obtain LPE series.

**TR:** Tax Revenues. Tax revenues series for 1987:Q1 – 2002:Q4 period was realized using 2003-based inflation (INF) series. Then the logarithm of the series was teken to obtain LTR series.

**OPTE:** Other Public Transfer Expenditure. Other public transfer expenditure series for 1987:Q1 – 2002:Q4 period was realized using 2003-based inflation (INF) series. Then the logarithm of the series was teken to obtain LOPTE series.

**BD:** Budget Deficit. Budget deficit series for 1987:Q1 – 2002:Q4 period was realized using 2003-based inflation (INF) series. Since BD series had negative values, the logarithm of the series was not taken.

A total of 7 general election periods between 1987 and 2002 were considered in the study. These were the elections held on November 29, 1987; October 20, 1991; December 24, 1995; April 19, 1999; November 3, 2002. Dummy variables derived to determine the variations in the related macroeconomic variables examined in the study are defined below:

- **E87D=1,** if it is the previous year before 1987 election period,
  **E87D=0,** otherwise
  **E87S=1,** if it is the following three months from 1987 election period,
  **E87S=0,** otherwise
- **E91D=1,** if it is the previous year before 1991 election period,
  **E91D=0,** otherwise
  **E91S=1,** if it is the following three months from 1991 election period,
  **E91S=0,** otherwise
- **E95D=1,** if it is the previous year before 1995 election period,
  **E95D=0,** otherwise
  **E95S=1**, if it is the following three months from 1995 election period,
  **E95S=0,** otherwise

- ▪ **E99D=1,** if it is the previous year before 1999 election period,
**E99D=0,** otherwise
**E99S=1**, if it is the following three months from 1999 election period,
**E99S=0,** otherwise
- ▪ **E02D=1**, if it is the previous year before 2002 election period,
**E02D=0,** otherwise
**E02S=1,** if it is the following three months from 2002 election period,
**E02S=0**, otherwise

### 5.  Findings

Initially the stationarity structure of the related variables was investigated in the empirical analysis stage. Furthermore, it was necessary to examine the existence of seasonality of the series, since they were quarterly and could include seasonal effects. Thus, it is required to examine the seasonal characteristics of the series and the tests developed to identify unit roots in seasonal series should be applied. In the study, "HEGY seasonal unit root test" developed by Hylleberg, Engle, Granger, and Yoo (1990) was applied to the variables for this purpose. Therefore, both seasonal effects and stationarity were analyzed in the series. Following the stationarity and seasonality analyses, in the model assignation stage, the series should be clean from seasonal effect and unit root to implement the Box-Jenkins methodology. Hence, seasonal differentials should be taken in series with seasonal effect and differential must be taken in series that contain unit root to redeem the series stationary. During the model determination stage, ARIMA (Autoregressive Integrated Moving Average) models were predicted with the help of correlograms. Among these models, AIC (Akaike Information Criterion) with the lowest information criterion was accepted as the most appropriate model. Initially, time path graphs for the series were given within the framework of the above mentioned methodology in Figure 1.
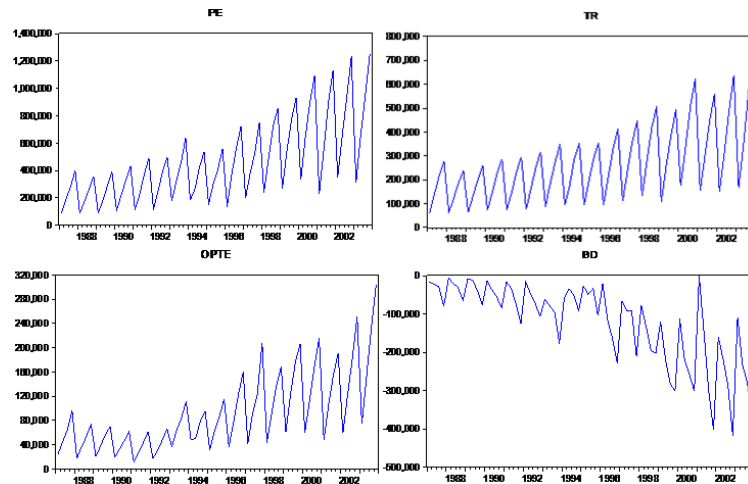
**Figure 1. Level Diagrams for PE, TR, OPTE and BD Series**

Public expenditures (PE) series for 1987:Q1 – 2002:Q4 was realized using 2003-based INF series, and then its logarithm was taken to obtain LPE series. Level time path graph for LPE series is presented in Figure 1. The graph shows that the series had a positive upward inclination during the 2000's. The level grapth of the final form of the tax revenues series, realized using the INF series and logarithm taken, and named as LTR, is displayed in Figure 1.

Other public transfer expenditures (OPTE) series was realized using INF series, and then its logarithm was taken to obtain LOPTE series. Level time path graph for LOPTE series is presented in Figure 1. The graph shows that the series had a positive upward inclination during the 2000's. The upward trend could be construed as an indicator that the series was not stationary. Budget deficit (BD) series was realized using INF series. Since it contained negative values, the logarithm of this series was not taken. Level time path graph for BD series is presented in Figure 1. The graph shows that the series had a downward inclination during the 2000's. The downward trend was probably an indicator that the series was not stationary.

Following the graphical assessment of the series, their correlograms were examined and HEGY seasonal unit root test was applied to see whether they contained unit root at zero frequency and seasonal frequencies. HEGY test results are presented in Table 1.

**Table 1. HEGY Test Results for PE, TR, OPTE and BD Series**

**PE**

| Aux. regr. | t1 ' | t2 ' | t3 ' | t4 ' | F3&4 ' | LM-sign |
|---|---|---|---|---|---|---|
| - | 2.527 | -0.404 | -0.632 | -0.168 | 0.212 | 0.255 |
| I | -0.679 | -0.402 | -0.611 | -0.192 | 0.204 | 0.260 |
| I, SD | -0.959 | -4.100 | -4.509 | -2.261 | 15.265 | 0.375 |
| I, Tr | -2.560 | -0.394 | -0.650 | -0.095 | 0.215 | 0.264 |
| I, SD, Tr | -3.067 | -4.458 | -5.199 | -2.072 | 18.689 | 0.852 |

**TR**

| Aux. regr. | t1 ' | t2 ' | t3 ' | t4 ' | F3&4 ' | LM-sign |
|---|---|---|---|---|---|---|
| - | 5.272 | -0.186 | 0.010 | -0.038 | 0.001 | 0.411 |
| I | 0.169 | -0.181 | 0.015 | -0.039 | 0.001 | 0.415 |
| I, SD | -0.037 | -6.048 | -6.726 | -4.246 | 31.621 | 0.249 |
| I, Tr | -1.642 | -0.064 | -0.064 | -0.023 | 0.002 | 0.339 |
| I, SD, Tr | -5.103 | -7.561 | -7.561 | -2.027 | 38.790 | 0.387 |

**OPTE**

| Aux. regr. | t1 ' | t2 ' | t3 ' | t4 ' | F3&4 ' | LM-sign |
|---|---|---|---|---|---|---|
| - | 1.443 | -0.592 | -0.765 | -0.192 | 0.309 | 0.17 |
| I | -0.331 | -0.583 | -0.752 | -0.196 | 0.300 | 0.175 |
| I, SD | -0.219 | -3.462 | -4.739 | -2.539 | 18.276 | 0.947 |
| I, Tr | -3.460 | -0.561 | -0.672 | 0.088 | 0.231 | 0.221 |
| I, SD, Tr | -2.599 | -3.579 | -5.198 | -2.266 | 20.101 | 0.141 |

**BD**

| Aux. regr. | t1 ' | t2 ' | t3 ' | t4 ' | F3&4 ' | LM-sign |
|---|---|---|---|---|---|---|
| - | 1.385 | 1.599 | 1.317 | 1.939 | 2.474 | 0.042 |
| I | 0.203 | 1.586 | 1.387 | 1.866 | 2.432 | 0.032 |
| I, SD | -0.804 | -1.503 | -1.381 | -2.392 | 3.651 | 0.132 |
| I, Tr | -3.365 | 0.092 | -0.279 | -0.477 | 0.145 | 0.118 |
| I, SD, Tr | -3.020 | -1.385 | -1.496 | -2.002 | 2.979 | 0.237 |

It could be observed from the HEGY test results displayed in Table 1 that the PE series did not contain stochastic seasonality, however it contained a non-seasonal

unit root. Thus, the series was rendered stationary by taking the first differential of the series. HEGY test results showed that TR series did not contain a seasonal or non-seasonal unit root. Therefore, no corrections were applied to the related series. OPTE series findings depicted in the table demonstrated that there was no seasonal unit root, however the series contained non-seasonal unit root. Thus, the series was rendered stationary by taking the first differential of the series. BD series results in the table showed that there were seasonal unit roots both in semi-annual frequency and annual frequency. Furthermore, non-seasonal unit root was also identified in the series. Thus, both first differential, and seasonal differential of the series were taken.

Box-Jenkins methodology was applied on the series following stationarity and seasonality analyses. It was determined that the most suitable autoregressive models for the public expenditures, other public transfer expenditures, tax revenues, and budget deficit series for 1987 Q1 – 2002 Q4 period were ARIMA (0, 1, 0) (0, 0, 1), ARIMA (1, 1, 1) (0, 0, 2), ARMA(1, 1), ARIMA (0, 1, 0) (1, 1, 0), respectively. Autoregressive model results for these series are presented in Table 2.

**Table 2. Autoregression Analysis Results for PE, OPTE, TR and BD Series**

|  | PE | | OPTE | | TR | | BD | |
|---|---|---|---|---|---|---|---|---|
|  | Coef. | t | Coef. | t | Coef. | t | Coef. | t |
| **E87D** | 0.007321 | 0.021054 | 0.066306 | 0.345888 | 0.628070 | 1.287977 | 4536.304 | 0.051759 |
| **E87S** | 0.072732 | 0.411915 | 0.157310 | 1.542683 | 0.076631 | 0.180951 | 658.8660 | 0.010949 |
| **E91D** | 0.004243 | 0.035255 | 0.176020 | 4.282583 | 0.048075 | 0.157228 | 1113.219 | 0.021666 |
| **E91S** | 0.013562 | 0.088934 | 0.279564 | 6.109172 | 0.267907 | 0.777209 | 5737.931 | 0.095958 |
| **E95D** | 0.070515 | 0.580317 | 0.011385 | 0.298136 | 0.188243 | 0.596935 | 774.6510 | 0.015077 |
| **E95S** | 0.081974 | 0.545651 | 0.071277 | 1.602739 | 0.379160 | 1.085725 | 18176.45 | 0.303993 |
| **E99D** | 0.033058 | 0.277438 | 0.047685 | 1.181360 | 0.178833 | 0.586198 | 12030.11 | 0.234140 |
| **E99S** | 0.028071 | 0.185567 | 0.083520 | 1.789631 | 0.088244 | 0.254493 | 48989.75 | 0.818893 |
| **E02D** | 0.032129 | 0.262702 | 0.018950 | 0.426627 | 0.176899 | 0.502477 | 7707.995 | 0.150017 |
| **E02S** | 0.123750 | 0.689157 | 0.225130 | 6.458039 | 0.307965 | 0.735887 | 22007.50 | 0.368010 |
| **AR(1)** |  |  | 0.984725 | 43.37561 | 0.985634 | 27.07702 | 0.559931 | 4.911920 |
| **MA(1)** | 0.984991 | 45.17493 | 0.983842 | 6.167231 | 0.975661 | 68.01274 |  |  |
| **SMA(2)** |  |  | 7.779202 |  |  |  |  |  |

*According to Traditional Opportunist Political Business Cycles Theory (TOPBCT), an increase in public expenditures is expected in pre-election period, while a decrease is expected in the post-election period.* This is due to the fact that the

government, which tries to convince the electorate to vote for the government, would implement expansionist fiscal policies to stimulate the economy before the elections. On the other hand, the elected government would implement contractionary fiscal policies to reduce public expenditures after the elections. *Dummy variables for public expenditure displayed in Table 2 demonstrate that there were no political business cycles in pre-election and post-election periods in Turkey between 1987 and 2003.* This was due to the prevailing economic conditions in the 1990's, which were not suitable to increase public expenditures, and the effects of the fiscal discipline that brought serious barriers against the manipulation of fiscal policy tools after the implementation of the Transition to the Strong Economy Program, which followed the 2001 crisis.

The findings of the study on public expenditures were compatible with the findings of others on Turkey. In a study conducted with quarterly data for 1988 – 2003 period, Sezgin (2005) found that there was no political business cycle (PBC) effect in public expenditures. Similarly, Karakaş (2013) stated that there was no increases in public expenditures in the pre-election periods, thus no PBC existed in public expenditures in a study conducted for 1962: 2 – 2008: 1 period.

*According to TOPBCT, an increase in pre-election period is expected in other public transfer expenditures, while a decrease is expected during the post-election period for the same.* The governments try to satisfy the electorate and to stimulate the economy to achieve a healthy economy via transfer expenditures assistance during the pre-election period. It could be observed in Table 2 that E91D, E91S, and E02S dummy variables for other public transfer expenditures were statistically significant, however they were not significant economically. Furthermore, E91D dummy variable was negative, while it should be positive and E91S and E02S dummy variables were positive, while they should be negative. Thus, it could be stated that there were no political business cycle effects on other public transfer expenditures in any election period. This finding means that the governments that want to be reelected did not display the tendency to increase other public transfer expenditures in the periods before the elections. Asutay (2004), consistent with the present study, found that the governments did not increase the transfer expenditures affected to public economic enterprises, a part of other public transfer expenditures, in the 1985: 1 – 2003: 1 period. Furthermore, Hızlı (2012) in the study conducted with quarterly data that covered the 1987 – 2007 period, did not find any political business cycles in other public transfer expenditures. Also Yıldırım (2009) decided that there was no PBC in "*transfers to social security institutions*," which could be considered in other public transfer expenditures in the study that covered 1987: 1 – 2007: 3 period.

*According to TOPBCT, a decrease in tax revenues should be expected before the elections, while an increase should be expected after the elections in the same.* Since the electorate do not like to pay taxes, governments tend to reduce the tax rates and implement tax amnesty to get votes during the election periods. After the elections, the governments increase the tax rates, increasing tax revenues to correct the

economical imbalance. Table 2 shows that none of the dummy variables for tax revenues in pre-election or post-election periods were statistically significant. *Thus, it could be stated that the governments did not reduce tax rates during the election periods in Turkey to be reelected*. Therefore, tax revenues, or tax rates were not manipulated by the governments during the related period. The lack of political business cycles in tax revenues in studies conducted on Turkey could be explained by the fact that the effects of tax rate increases or reductions are only visible with a delay. Because, taxes are not policy tools that the politicians could use immediately and that could react rapidly. Furthermore, due to the frequency of the elections, the governments in Turkey did not have time to manipulate tax rates or taxing structures, and the results of the study was conceivable in the Turkish context.

This result was consistent with the findings of other similar studies conducted on Turkey. For instance, Sezgin (2005) did not encounter political business cycles on tax revenues in the study conducted for 1953 – 2003 period. In an analysis of the period of January 1985 – May 1999, Ergun (2000) found that there was no political business cycle in pre-election and post-election tax revenues. Also Karakaş (2013), parallel to this study, did not find any political business cycles in tax revenues. Similarly, in a study that examined several series for Turkey within the 1987 – 1999 period, Ergun (2000) found that the elections in this period did not have any effects on tax revenues. Karakaş's (2013) analysis did not demonstrate any manipulative effects on tax revenues during election periods.

Based on the assumption of TOPBCT, the governments that implement expansionist fiscal policies before the elections would cause an increase in budget deficit. *Thus, according to TOPBCT, an increase in budget deficit is expected before the elections, and a decrease is expected in the post-election period*. The results of the autoregressive model for budget deficit series in Table 2 showed that there were no increases in budget deficit in any election period, also there were no decreases in any post-election period. *Thus, it could be deducted that there were no political business cycles in budget deficit during the elections conducted between 1987 and 2012 in Turkey*. Since the budget deficit series was a policy output similar to GDP, inflation and unemployment series, the fact that there was no PBC in budget deficit could be interpreted as a finding that supports that "*it was difficult to observe PBC in policy outputs*."

This result was compatible with several studies conducted for Turkey. In a study by Özatay (1999) conducted with quarterly data covering 1985 – 1995 period, it was found that there was no PBC in budget deficit. Again, in a study by Tutar and Tansel (2000) conducted using annual budget deficit series, no PBC was observed in budget deficit for the 1960 – 1996 period. According to Tutar and Tansel (2000), while elections were not effective on budget deficit as a political factor, on the contrary, coalition governments in Turkey had a greater negative effect on budget deficit. Thus, when scrutinizing political and institutional factors on the budget deficit, special emphasis should be given to the factor of coalition governments. And since Tutar and

Tansel (2000) observed PBC in monthly budget deficit series in the same study, it would be advisable to use monthly data if possible in political business cycle theory analyses as suggested often in the literature.

### 6. Conclusion

The first traditional political business cycles theory was the traditional opportunistic political business cycles theory by Nordhaus' (1975). According to this theory by Nordhaus (1975), the main purpose of the government parties is to get votes from the electorate by creating the vision that the economic performance is in a positive course. Thus, during the pre-election periods, the government parties implement expansionist policies to improve the economy. However, during the post-election period, to correct the economic imbalance caused by these expansionist policies, the governments would prefer contractionary economic policies this time around. Therefore, causing *systematic* political business cycles during election periods.

Nordhaus (1975)'s *Traditional Opportunistic Political Business Cycle Theory* was tested for the Turkish economy using series of *public expenditure, other public transfer expenditure, tax revenues and budget deficit.* The reason for the use of these variables in the analysis is that these variables have often been used in analyses for fiscal policy at the macroeconomic level in the literature of Traditional Opportunistic Political Business Cycle Theory. In the determination of whether or not political opportunistic policies were observed in general elections held in the 1987-2012 period, the *"Seasonal Box Jenkins Model"* that was used by Alesina, Cohen and Roubini (1992) for OECD countries and industrial countries, was also used in this study. In the findings obtained, no political business cycles were encountered either in the election periods or in the periods following elections in any of the variables of *public expenditure, other public transfer expenditure, tax revenues and budget deficit. Therefore, according to this study, the Traditional Opportunistic Political Business Cycle Theory is not valid for Turkey. Another meaning of this result is that expansive fiscal policies were not applied in the election period or contractionary fiscal policies were not applied after the election for various reasons the goverment experienced difficulties in their implementation.*

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