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FISCAL ADJUSTMENTS AND STIMULI: TURKISH CASE

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ABSTRACT

We examine the fiscal adjustment and stimulus episodes in Turkey by using data from 1986 to 2012. After identifying 5 fiscal adjustment and 3 fiscal stimulus episodes, we find that the fiscal adjustments relied on revenue increases are neither successful nor expansionary, while the two fiscal adjustments based on spending cuts are both successful and expansionary. Our results seem to suggest that expectation channel is important in explaining expansionary fiscal adjustments while the changes in trade balance are not. We think that Turkish case clearly shows that fiscal adjustments can be expansionary. However the contributions of several other important factors behind the episodes should also be noted. Successful and expansionary fiscal adjustments when combined with favourable political and economic conditions may not be associated with political costs. One of the fiscal stimulus episodes is expansionary while the remaining two are not.

1. INTRODUCTION

In many developed countries, significant increases in the budget deficits and public debts in 1970s forced governments to implement various fiscal adjustment or consolidation programs. Since how the programs are implemented has important implications for social welfare, these adjustments have drawn attention for a long time. After the last global crisis, many developing countries have implemented some kind of fiscal stimulus programs and have seen some increases in their budget deficits and public debts. There is an ongoing debate as to whether these countries should implement fiscal austerity or adjustment programs, namely cuts in government spending and/or increases in taxes, now or later. On the one hand, it is reasonable to argue that fiscal adjustment programs can have damage on or retard already fragile growth rates. On the other hand, it is also plausible to argue that fiscal adjustment programs don't have to be necessarily contractionary or damaging for the economic growth.

In several cases, indeed, even larger fiscal adjustments are not associated with contractions. Many studies clearly document that expansionary fiscal contractions are possible under certain conditions. However it would be misleading to think that all fiscal consolidations are successful or expansionary. Therefore it is very important to design a fiscal adjustment program which will be both successful at reducing budget deficits and public debt and also will not be contractionary.

This paper examines the fiscal adjustments and stimuli in Turkey using data over the period 1986-2012, but focusing more on the adjustments. The present paper differs from Ozatay (2008), who also studies fiscal adjustments in Turkey, in several aspects, such as using data for a longer time period and different definitions for fiscal adjustment, taking the changes both in the primary balance and cyclically adjusted primary balance into consideration, employing the more disaggregated spending data, looking at the political consequences of adjustments, examining fiscal stimulus episodes as well. We briefly explain the theoretical background in section 2, survey the empirical literature in section 3, give a short overview of Turkish fiscal policy during the period examined in section 4, examine the fiscal adjustment and stimulus episodes in section 5 and finally conclude in section 6.

2. THEORETICAL BACKGROUND

According to the standard Keynesian model, a fiscal adjustment is typically contractionary not expansionary. A fiscal adjustment (stimulus), such as a cut (increase) in government spending or an increase (cut) in taxes or a combination of them, causes a decline (rise) in aggregate output through the well-known demand channel. But, as mentioned above, several studies show that some fiscal consolidations are expansionary. Since expansionary fiscal consolidations are stark contrasts with the predictions of standard Keynesian model, these effects are called non-Keynesian or non-conventional effects of fiscal policy. How a fiscal adjustment can be expansionary? There are some demand and supply channels that can lead to expansionary fiscal adjustments. A change in fiscal policy can alter people's expectations and hence their economic behavior. Giavazzi and Pagano (1990, 1995), Blanchard (1990) and Bertola and Drazen (1993) highlight this point to explain non-Keynesian effects of fiscal policy. As Giavazzi and Pagano (1990) argue if fiscal policy decisions convincingly signal a change in fiscal policy, fiscal adjustment can have different effects from conventional Keynesian model predicts. Blanchard (1990) points out that it is possible for a government to eliminate a greater tax increase in the future by increasing taxes today and this can have a positive effect on the current consumption. Following a similar line of reasoning, Bertola and Drazen (1993:12) suggest that "*A policy innovation which would be contractionary in a static model may be expansionary if it induces sufficiently strong expectations that future spending and therefore taxes will be significantly lower it may induce an expansion in current private spending*". Sutherland (1997) shows that when the public debt is very high, since people expect to pay additional taxes, an increase in deficit can have a contractionary not expansionary effect.

This approach suggests that after a fiscal crisis or when the debt/GDP ratio is very high, the probability of an expansionary fiscal adjustment may be higher due to the possible change in the expectations.

Alesina and Perotti (1996), giving a good and some critical overview of both expectation view and the channels that lead to the expansionary fiscal consolidations, suggest that the compositions of fiscal adjustments are very important. Their argument is that the composition of fiscal adjustment can matter through the expectation, credibility and labor market effects. According to the this approach, the fiscal adjustments based on cuts in government spending, particularly in some categories, like transfers, would be more successful and expansionary than those based on revenue increases. Alesina and Perotti (1996) describe the fiscal adjustments based on spending cuts and tax increases, as Type 1 and Type 2 respectively. Unlike Type 2, Type 1 adjustments seem to be more persistent and can indicate how serious the government is to improve public finance. For example if a fiscal adjustment is based on the cuts in public investment, it may not be persistent because these cuts can be mainly temporary. In a similar way, since cutting some spending categories, such as government wages or social transfers, is politically risky or unattractive only a resolved government can make reductions in these categories.

Many studies, such as Giavazzi and Pagano (1990), Perotti (2011), Alesina and Ardagna (2012) indicate the role of accompanying policies, such as exchange rate and monetary policies, structural reforms and wage moderation for the fiscal adjustments. For example a devaluation can probably eliminate or decrease the possible contractionary effects of the fiscal consolidation. Likewise a loose monetary policy may mitigate the contractionary impacts of the fiscal adjustments on the economy. The absence of appropriate policies can make fiscal adjustments unsuccessful and contractionary. Expansionary fiscal consolidation hypothesis does not suggest that every fiscal consolidation will be necessarily expansionary. It only suggests that, in some cases, a fiscal consolidation can be expansionary if it is implemented appropriately and accompanied by a good supporting policy package.

As for fiscal stimulus, neoclassical model totally differs from Keynesian one. Although in a neoclassical model, a change in government spending or taxes can lead to a change in the economic activity, neoclassical approach generally does not support the view that government must change government spending or tax rates as a response to cyclical conditions or for stimulus purposes. Also according to the well-known Ricardian equivalence hypothesis by Barro (1974) when a government cuts the tax rate, assuming the government spendings stay constant, people will save more than they did before, because they expect to pay more taxes in the future. Expectations are also important for fiscal stimulus programs.

3. EMPRICIAL LITERATURE

There is a really vast literature estimating the effects of fiscal policy changes or shocks on the economy, like Blanchard and Perotti (2002), Perotti (2002), Romer and Romer (2007), Mountford and Uhlig (2008).

However we only focus on a certain strand of the literature, namely the literature examining the fiscal adjustment and stimulus episodes. This literature overwhelmingly focuses on the fiscal adjustments. There are many studies examining the fiscal adjustments in developed countries.

Giavazzi and Pagano (1990) examine the fiscal consolidations in Denmark and Ireland in 1980s and find that they are expansionary. Giavazzi and Pagano (1995), using data for 19 OECD countries and focusing on Swedish fiscal expansion in early 1990s, conclude that changes in fiscal policy can have non-Keynesian effects in some cases and both the changes in government spending and taxes and transfers can cause these effects.

Some studies, such as Alesina and Perotti (1995, 1996), Alesina et al. (1998), Alesina and Ardagna (2009, 2012), using data for OECD countries, strongly argue that the composition of fiscal adjustment matters. Alesina and Perotti (1995) present some evidence that successful fiscal adjustments are not recessionary and also argue that coalition governments are not successful regarding the fiscal adjustments. Alesina and Ardagna (1998) confirm the previous results that cuts in spending, particularly in transfers, welfare programs and government wage payments are critical for lon lasting and expansionary fiscal adjustments. They also point out that the accompanying devaluation is important. Alesina et. al. (1998), focusing on the political economy of fiscal adjustments, find that fiscal adjustments can be expansionary in some cases and argue that fiscal adjustments don't lead to the poltical punishment of the governments which implemented some adjustment programs. Afonso et al. (2005) using data for 10 Central and Eastern European countries over the period 1991-2003 conclude that expenditure based consolidations are more successful than the revenue based ones. Alesina and Ardagna (2009) find that fiscal stimuli based on tax cuts are more expansionary than those based on spending increases while the reverse is true for fiscal adjustments, namely the adjustments based on spending cuts are more successful than those based on tax increases. They also argue that, in some episodes, spending cuts are associated with expansions rather than contractions. Broadbent and Daly (2010), examining large fiscal adjustments in OECD countries and three case studies in Ireland, Sweden and Canada, argue that fiscal adjustments based on the government expenditure, unlike tax based ones, are successful and boost growth. Alesina et al. (2012) estimate the output effect of fiscal adjustments in OECD countries and conclude that spending based adjustments are less costly than tax based ones. They argue that the accompanying policies, including monetary policy, can not explain the difference. In another recent paper, Alesina and Ardagna (2012), using data from 21 OECD countries, suggest that spending based fiscal adjustments are more successful and permanent than the tax based ones and also argue that spending based adjustments cause smaller recessions. They also discuss the role of related polices, such as changes in goods and labor markets, for expansionary fiscal adjustments.

Some papers don't find evidence in favor of expansionary fiscal contractions hypothesis. Hogan (2004), using panel data for OECD countries, finds that there is a limited evidence for expansionary fiscal contractions and the increase in private consumption is not enough to offset the reductions in public consumption. IMF (2010) identifies fiscal adjustment episodes for OECD countries in a different way than the previous literature did.

More precisely it examines the fiscal policy actions, which aim at reducing budget deficits and making public finances sustainable, instead of budget outcomes, to identify the adjustment episodes and finds that fiscal consolidations have negative effects on the output in the short run and cause an increase in the unemployment rate.

IMF (2010) concludes that reductions in interest rates and devaluation have a positive effect on output and reports that spending based consolidations seem to have smaller negative or contractionary effects because the latter partly arises from the fact that a more loose monetary policy implemented following spending based adjustments. Guajardo et al. (2011), using a data set from 17 OECD countries, find that fiscal consolidations have contractionary effects on consumption and GDP, but when the ratio of cyclically adjusted primary balance to GDP is used to find the episodes, their findings support expansionary fiscal adjustment hypothesis. They also suggest that a rise in exports, associated with devaluation, can help mitigate the decline in private consumption and investment. Perotti (2011) examines 4 fiscal adjustments in Ireland, Denmark, Finland and Sweden and points out some doubts about expansionary fiscal consolidation hypothesis. He argues that these fiscal consolidations relied on tax increases more and spending cuts less than previously thought and indicate the role of exchange rate policy, interest rates, wage moderation and competitiveness.

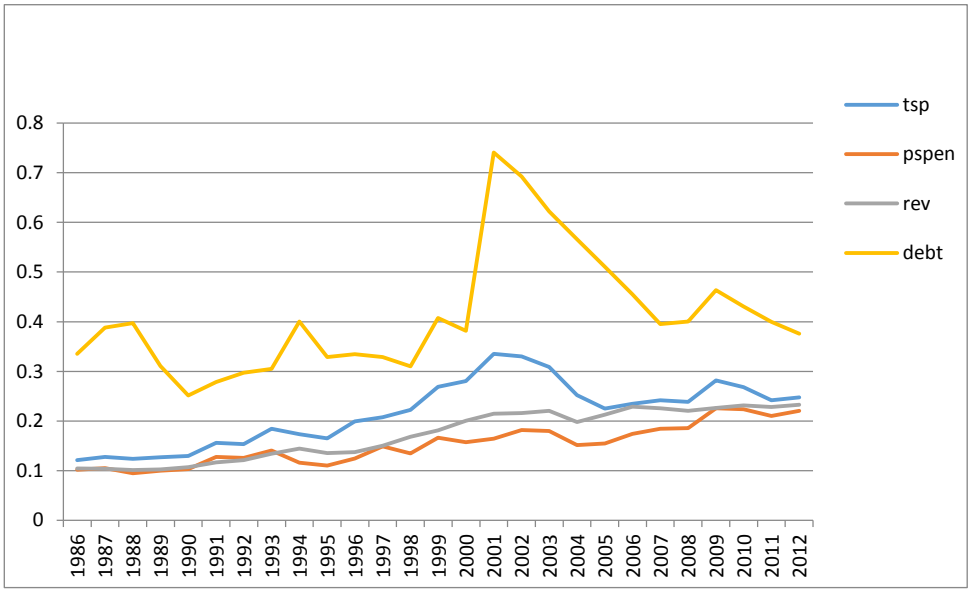
A limited number of papers examine the fiscal adjustments in developing or low-income countries. Gupta et al. (2002) find that fiscal consolidations are not harmful for the growth in 39 low-income countries during the 1990s and argue that the composition of expenditure is important. Purfield (2003) concludes that both the size and compositions of fiscal adjustments are important in 25 transition countries and argues that generally expenditure based fiscal adjustments are more successful than revenue based ones, but does not present much evidence for expansionary fiscal contractions hypothesis. Baldacci et al. (2004), examining the successful fiscal adjustments in 25 emerging market economies, conclude that back-loaded adjustments have a higher probability of success than front-loaded ones since the former allows government to implement better reforms. They also find that spending based adjustments are more successful at achieving fiscal sustainability, however revenue reforms are needed. Rocha and Picchetti (2003) find that the fiscal adjustment of Brazil in 1994 which mainly based on cuts in public investment while leaving government wages and transfers unchanged is not successful. Erdogan (2007), Ozatay (2008), Dincer and Ozdemir (2009) and Ilgun (2010) examine the fiscal adjustments in Turkey. Erdoğan (2007), employing the data over the period 1987-2006 and Structural Vector Autoregression and Error Correction Models, find that fiscal contractions are not expansionary in Turkey. Ozatay (2008), using data for 1990-2006 period, focuses more on the credibility and expectations channel and suggests that when balance sheet weakness is extreme, fiscal consolidation should address it. He finds that fiscal consolidation in 2003-2005 reduces the debt/GDP ratio significantly and notes the growth rate is remarkably high during that period. Dincer and Ozdemir (2009), using monthly data for 1994:1-2005:11 and ARFIMA method, examine the composition of budget and the persistence of adjustments. They find that Turkish fiscal policy does not have a high quality and point out that the cuts in government personnel and transfer expenditures are not persistent.

Ilgün (2010), using quarterly data for 1987-2009 period and ARDL approach, finds that government consumption expenditures have the Keynesian effects on private consumption.

4. A BRIEF OVERVIEW OF TURKISH FISCAL POLICY AND ECONOMIC CRISES

In this section we will give a brief overview of Turkish fiscal policy during the period examined. We use annual data from 1986 to 2012.[1] We use fiscal data for central government.[2] Total government spending, primary spending which means total spending excluding interest payments, revenue and debt stock series can be seen at Figure 1[3].

Figure 1: Government total spending, primary spending, revenue and debt (as a share of GDP)



It is clear that the government spending and revenue have substantially increased over time. The primary spending and revenue increases from about 10 percent in 1986 to above 20 percent in 2012. In general the revenue has been stable over just 20 percent since 2000. Especially, the revenue has stayed at about 22 percent since 2006. The primary spending increases significantly in 2009, from 18 percent in 2008 to 22 percent in 2009. It has not returned to below 20 percent since 2009. This shows that there is a permanent increase in the primary spending. This is an indication of permanent increase in the primary spending. Except for the period 2001-2005, the debt has remained below 50 percent. From 2006 to 2012 the ratio is about between 45 percent and 37 percent.

[1] Government spending and revenue data come from Turkish Ministry of Finance, debt from Undersecretariat of Turkish Treasury, GDP from Turkish Statistical Institute and Turkish Ministry of Development (TMD), subcategories of GDP, interest rate and exchange from TMD and Turkish Central Bank (TCB), confidence index from TCB, trade balance from TMD.

[2] Before 2006, consolidated government.

[3] We use fiscal variables as a share of GDP unless stated otherwise.

After 2001, thank to factors such as high growth and low interest rates, the debt declines significantly. There is a dramatic increase in the debt in 2001. There are also some remarkable increases in the ratio in 1994, 1999 and 2009. This is not surprising because 1994, 1999, 2001 and 2009 are years in which Turkish economy hit by financial crises, the last one being the well-known global crisis. To understand the fiscal adjustment and stimulus episodes better, it would be useful to give a summary of 1994, 1999 and 2001 crisis and measures taken against them.

In the aftermath of post-liberalization (Uygur: 2010: 1) financial crisis of 1994, the Turkish economy experiences a significant contraction of about 5.5 percent a severe crisis in 1994. On April 5th, 1994 a stabilization program is put into effect by the government. The program which is later backed by IMF, especially relied upon some austerity measures to reduce the government budget deficits. Celasun (1999:19) suggests that declining public spending, controlling public sector wages and increasing public sector prices contributed to the contraction. On the revenue side the weight is mainly given to one time taxes such as tax on the net assets of the firms, some additional wealth taxes and taxes on income. The program also included medium term structural adjustment measures such as the implementation of the privatization program and social security reforms (Celasun, 1999).

While trying to recover from the effects of the 1994 crisis, the Turkish economy hit worse by the Asian and particularly the Russian crisis in 1998 and 1999 and also an earthquake. These adverse effects increase the fragility of the already shaky economy. The resulting large increases in the cost of public borrowing and deteriorating macroeconomic conditions led to the announcement of a stabilization program. The program's focus is to reduce the inflation and is supported again by IMF through a new stand-by agreement at the end of 1999. The program in terms of interest rates and growth generate some positive effects in early 2000, but lose its credibility because of the failure in area of privatization and structural reforms (Dincer and Ozdemir, 2009:115). The cost of failure of the program is the currency and banking crisis in February 2001, the most severe financial crisis in history of Turkey.

Following the failure of the IMF-Supported program of 1999 and the resulting severe twin crisis in 2001 a new IMF backed program called "Transition to the Strong Economy Program" is put into practice. The new program which is accompanied by a large IMF loan starts with similar objectives (ie, ensuring the stability by way of reduced public deficits, lower inflation and sustainable growth) except that the crawling-peg system is replaced by a floating exchange rate system (Uygur 2010: 38). Uygur (2010:38) indicates that the program contains a framework with base money as a nominal anchor and summarizes the program's monetary policy framework as follows:"…*part of the IMF credits would be auctioned to meet FX demand, preconditions would be created for an 'implicit inflation targeting' policy and short-term interest rates were to become critical policy variables*". The debt sustainability was one of the key concerns or priorities of the program, due to a high jump in the debt/GDP ratio in the beginning of 2001. Besides a high primary surplus target, some upper limits were put on the public expenditures and floors on the total balance (Uygur, 2010: 46).

5. EXAMINATION OF FISCAL ADJUSTMENT AND STIMULI IN TURKEY

In this section, first, we give the definitions of fiscal adjustment and stimulus for the purposes of this paper and determine the relevant episodes. Then we will examine the fiscal adjustments and stimulus episodes in some detail.

5.1. THE DEFINITIONS AND DETERMINATIONS OF THE EPISODES

Although there is no consensus regarding to how a fiscal adjustment should be defined, there are two main approaches. One approach, employed by such as Alesina and Ardagna (1998, 2009), Baldacci (2004) and Purfield (2003) among others and can be called outcome based, focuses on the change in the budget balance. The other approach, used by IMF (2010) and can be called action based, examines the discretionary actions. We follow the outcome based approach. It is common to use primary budget balance rather than total balance in the literature. The rationale behind that is interest payments are not directly under government control, especially in the short run. Since cyclical conditions affect the budget balance, many studies try to disentangle the effects of discretionary policy from cyclical factors. But it is well known that any cyclical adjustment is far from being perfect. Therefore some studies, such as Purfield (2003) and Baldacci et al. (2004), use the primary budget balance. Purfield (2003) points out that the importance of automatic stabilizators in transition economies is not clear. We think that this is also valid for developing and emerging economies, like Turkey. So we use both the primary balance and cyclically adjusted primary balance to identify fiscal adjustment (stimulus) episodes.[4] More precisely we define fiscal adjustment (stimulus) episode as follows: The ratio of primary balance to GDP and the ratio of cyclically adjusted primary balance to potential GDP improve (deteriorate) by at least either i) 1 percentage point in a single year, or ii) 0,5 percentage point in each year and 1,5 percentage point cumulatively in two or three consecutive years. In other words, we consider a period as a fiscal adjustment (stimulus) if both the changes in primary balance and cyclically adjusted primary balance take place. When a single or two year fiscal adjustment (stimulus) episode is a part of a longer fiscal adjustment (stimulus) episode, we consider only the longer one. In this way, we find 3 single year, 1 two year and 1 three year fiscal adjustment episodes: 1994, 1998, 2000, 2010-2011 and 2003-2004-2005. There are also 2 single year and 1 three year fiscal stimulus episodes: 1991, 1999 and 2007-2008-2009. Since the main purpose or motivation of fiscal adjustment programs is to reduce the public debt stock or budget deficit, the success of these programs is naturally evaluated by looking at the changes in these variables.

[4] There is no readily available cyclically adjusted primary balance series for Turkey. Abdih et all (2010) suggest that it is common to assume that elasticities of government spending and revenue is zero and one, respectively, for developing and emerging countries to estimate cyclically adjusted primary balance series. We estimate it by following Fedelino et all (2009), Abdih et all (2010) and assuming those elasticities for Turkey.

Alesina and Ardagna (2012:6) consider a fiscal adjustment successful "*…if the debt/gdp ratio two years after the end of an adjustment is lower than the debt/gdp ratio in the last year of the adjustment."* We adopt the same definition[5]**.** A very important question is whether fiscal adjustments and stimuli are expansionary or not. A fiscal adjustment is defined as expansionary by Alesina and Ardagna (2012:6) "*…if real GDP growth during the adjustment period is higher than the average growth the country experienced in the two years before.*" Purfield (2003:8), however, describes a fiscal adjustment as expansionary "*…if the average real GDP growth rate during the adjustment episode and two subsequent years is at least one standard deviation above the average growth rate recorded for that country over the period 1992-2000.*" We consider a fiscal adjustment and stimulus expansionary if, on average, the real GDP growth rate during the fiscal adjustment and stimulus episode and two subsequent years is higher than the average growth rate in i) the two years before, and ii) the entire period examined.

5.2. THE SIZE AND COMPOSITIONS

As one strand of the literature shows the importance of the composition of fiscal adjustment (stimuli), we will examine whether the fiscal adjustments (stimuli) are based on spending declines (increases) or revenue increases (decreases). Based on the evidence in Appendix 1 following observations deserve more attention. First, government primary spending, when compared to preceding two years average, declines in 1994, 1998 and 2003-2005 episodes. In 2000 and 2010-2011 episodes, on the other hand, there are increases in the primary spending. The decline in total spending, which highlights the decrease in government interest payments, in the 2003-2005 episode is striking. Second, the revenue increases during 1994, 1998 and 2000. The increase in revenue during 1998 and 2000 draws particular attention. Another striking point is that revenue actually declines during successful and expansionary episode of 2003-2005. In the episode of 2010-2011, the revenue only slightly increases. The unsuccessful and unexpansionary episodes of 1998 and 2000 can be characterized by revenue increases while during successful but unexpansionary episode of 1994 both the spending decline and tax revenue increase take place. But the decline in the primary spending, when two-year period following the episode is also taken into account, is greater than the increase in the revenue. The main feature of the 2003-2005 episode is the decline in the (total) spending.

Lastly, the 2010-2011 episode, at a first look, does not show a clear pattern in favor of neither expenditure decline nor revenue increase. However a closer scrutiny shows that this episode actually is based on spending declines. Primary spending increases by about 4 percentage points in 2009, then it declines by about 1,6 percentage points cumulatively in 2010-2011 while the revenue does not change much in the same period. Since the composition of spending cuts can also matter, we also look at the changes in the main categories of spending.

5 For the single year fiscal adjustment episodes, we take the year in which fiscal adjustment took place as the end of the adjustment.

When it comes to government wages, the episodes of 1994 and 2003-2005 are noteworthy. In both of these episodes the decline in government wage bill continues also after the fiscal adjustment period. In two of the remaining three periods government wages roughly preserve their level of preceding two years average. During episode of 1998, on the other hand, government wages increase by 0,4 percentage points. Alesina and Ardagna (2009) highlight the importance of changes in transfers in explaining the difference between expansionary and contractionary adjustments. In contractionary cases, transfers continue to grow as a percentage of GDP while in expansionary episodes, instead, the opposite is observed. Transfer spending decreases both in the period of 1998 and 2003-2005 while an increase is observed during the other three episodes. When we compare the non-interest transfer spending during the episodes with the same spending component in one year before adjustment episodes take place, it declines during the episodes of 1994, 1998, 2000 and 2010-2011. We should note that transfer spending declines substantially, by about 3 percentage point, from 2003 to 2004. As for fiscal stimulus episodes, all episodes are based mostly on spending increases. Actually there is no stimulus episode that is relied on tax cuts. There are substantial increases in primary spending in 1991, 1999 and 2007-2008-2009. Non-interest transfer spending and government wages increase significantly during all fiscal stimulus episodes.

5.3. FISCAL ADJUSTMENTS

In this section we will examine the adjustment episodes on the basis of two criteria: Whether they are successful and expansionary or not. When doing this, following Alesina and Ardagna (2009), we also look at the behavior of fiscal and macroeconomic variables around those episodes to investigate whether different characteristics of fiscal packages are associated with different macroeconomic outcomes.

5.3.1. ARE FISCAL ADJUSTMENT SUCCESSFUL AND EXPANSIONARY?

Based on our definitions we find that fiscal adjustment episodes of 2003-2005 and 2010-2011 are clearly successful and expansionary while the episodes of 1998 and 2000 are neither successful nor expansionary. The episode of 1994 is more complicated because it is successful but not expansionary. We think that the composition of fiscal adjustments matter. Given that revenue based two episodes are unsuccessful and not expansionary while spending based episodes are undoubtfully successful and two of them also are expansionary, our results can be interpreted as lending support to the finding that Type 1 adjustments tend to be more successful and expansionary than Type 2 ones.

Regarding to the composition of spending declines, we don't see any decisive difference between successful vs. unsuccessful episodes and expansionary vs. unexpansionary episodes. Despite the significant decline in non-interest transfer spending during the episode of 1998 compared to one year before, that episode is neither successful nor expansionary. Although the size of the episodes of 2003-2005 and 2010-2011 is not bigger than that of other episodes, these two episodes are both successful and expansionary. It seems that, in general, the composition of fiscal adjustment may be more important than the size of it.

Both of fiscal adjustments last more than one year are successful and expansionary. This may be interpreted as longer term adjustments have a higher probability of being successful and expansionary. This unsurprising result is consistent with the finding of Baldacci et all (2004:8), which is longer fiscal adjustments tend to be more successful. We should note that the growth rates are very high, more than 7 percent on average, during these episodes.

5.3.2. FISCAL ADJUSTMENTS ANDMACROECONOMIC INDICATORS

Having summarized the likely contribution of fiscal variables to the success and expansionary nature of the adjustments, some observations about the behavior of macro variables will be useful. Appendix 2, which is designed based on the format developed by Alesina and Ardagna (1998) and (2009), gives summary statistics regarding some relevant macro variables. Which critical variables are behind the successful and expansionary episodes and through which channels the effects of these variables are revealed? On this point in the literature, structural reforms left aside, expectations of economic agents, interest rates, wage moderation and the exchange rate devaluation are most highlighted items. The changes in these items are expected to be reflected in private investment, private consumption and export performance of the economy. Appendix 2 highlights the following points. During successful and expansionary episodes of 2003-2005 and 2010-2011 improvements in expectations as reflected by the confidence index are remarkable. The jump in the index in the first period is about 15 percentage points while more than 20 percentage point increase recorded during the second episode. As it is apparent from Appendix 2, a completely opposite picture emerged during the episodes of 1994 and 1998. At this point the increase in confidence index during unsuccessful and unexpansionary episode of 2000 needs a brief clarification. As it is noted in the preceding paragraphs, in the year 2000 a newly IMF program is started to be implemented. Initially it seemed that program is working well. But towards the end of the year picture reverses totally. Among others, this can be seen clearly from the monthly averages of the confidence index (not shown in the table) which took the value of 80 in the last moth of the year. When we look at components of GDP, we find that private investment plays an important role. During both of the expansionary episodes, the increase in private investment is remarkably high. In contrast, during episodes of 1994 and 1998 sizeable contractions are seen in private investment. Private consumption reveals similar but somehow much less explicit trend. Overall this evidence may be regarded as a sign of the effectiveness of the expectation channel.

There are substantial decreases in nominal rates during all but one episode. The reasons behind the failure of reduction in public debt and poor growth performance during the 1998 and 2000 episodes, despite the striking decline in interest rates on domestic borrowing must be sought in weaknesses of the Turkish banking sector[6].

[6] For detail on the weaknesses in the banking sector which continuously increased during second half of the 1990s see Özatay and Sak (2002) and Özatay (2008).

Another variable that is mostly cited in the literature in context of the expansionary fiscal adjustments is exchange rate. As stated before, the argument is that exchange rate depreciation through improvement in competitiveness may induce an export boom leading to moderation in contractionary effects of the fiscal adjustment. The percentage change in the nominal exchange rate during period of 2003-2005 is actually negative while during the other expansionary episode is only 4 percent which is below the inflation rate. This is an indication of real appreciation of Turkish Lira. It is really interesting to note that during and after the expansionary fiscal adjustment episode of 2003-2005, trade balance deteriorates. Although trade balance improves during the fiscal adjustment episode of 1994, that episode is not expansionary. Trade balance over GDP ratio improves (deteriorates) after (during) fiscal adjustment episode of 2000, while it does not change much during the fiscal adjustment episode of 1998, but deteriorates after that episode. Although one can reasonably expect that expansionary fiscal adjustments are likely associated with improvements in trade balance, our findings don't seem to be consistent with this expectation. Unemployment rate also increases during and after 2003-2005 episode while it declines during and after 2010-2011 episode. Also there is a remarkable decline (increase) in unemployment rate after 1994 (2000) episode.

5.3.3. POLITICAL CONSEQUENCES OF THE FISCAL ADJUSTMENTS

As for political consequences of fiscal adjustments in Turkey, general elections are held in 1987, 1991, 1995, 1999, 2002, 2007 and 2011 during the period examined. All of 3 single year fiscal adjustments in 1994, 1998 and 2000 are implemented by the coalition governments, while successful and expansionary fiscal adjustments that last more than one year in 2003-2005 and 2010-2011 are implemented by the same single party governments. The coalition parties are badly defeated in 1995 and 2002 elections, while the running party increases its vote in 2007 and 2011 elections and remains in office. In other words, the successful and expansionary fiscal adjustments in 2003-2005 and 2010-2011 do not cause any political punishment or cost for the single party governments while the coalition parties that implement the unsuccessful fiscal adjustment in 2000 pay a very high political cost. Interestingly fiscal adjustment in 1994, which is successful but not expansionary, causes some political costs for the coalition parties. Political consequences of fiscal adjustment in 1998 are more complicated. In the beginning of 1999, the coalition government is replaced with a single party minority government and that party increases its vote in 1999 election. The other party of the coalition government loses votes in the same elections.

We should note that especially in 1999 elections, there are some highly influential non-economic factors that may explain why the party formed the minority government increases its vote. We conclude that successful and expansionary fiscal adjustments don't seem to cause any political costs for the parties implement them. But regarding to fiscal adjustments which are not successful or expansionary, there would be some political costs. Our results also imply that single party governments may be better at implementing longer term, successful and expansionary fiscal adjustment programs than coalition governments.

5.4. THE FISCAL STIMULI

As noted before, 1991, 1999 and 2007-2009 are identified as fiscal stimulus episodes. It should be noted at the outset that all these episodes (in the case of last episode 2007) are general election years. Among these episodes only the first one is found to be expansionary. Since there is not an obvious criterion to define a successful episode as in the case of fiscal adjustments (Alesina and Ardagna, 1998: 508), the episodes are examined and compared on the basis of whether they are expansionary or not. More clearly, following Alesina and Ardagna (1998) and (2009) we will look at the behavior of some fiscal and macroeconomic indicators before, during and after the episodes. In this way we can try to detect differences in the effects of fiscal packages depending on their composition. Appendix 3 and Appendix 4 are arranged for this purpose. The first issue is whether there is any difference between the two kinds of episodes on the basis of the composition of the stimuli packages, ie spending increases vs. tax cuts. As mentioned before, all fiscal stimulus episodes are based on spending declines. Interestingly during the fiscal stimulus episodes of 1991 and 1999, the revenue increases. Since there is no episode relied on tax cuts, we can not test the proposition that fiscal stimuli based on tax cuts are more likely to increase growth than those based on spending increases. However, one may wonder whether the outcomes would have changed if revenue based fiscal stimulus had been implemented.

The second point is associated with how elements of the aggregate demand change during the episodes. In this framework especially the behavior of the private spending and consumption is intriguing. Looking at Appendix 4, the course of the private investment is noteworthy. During all episodes substantial decreases are recorded in the private investment. However, except the case of 1999, which had unique conditions as mentioned previously, it recovers immediately after the episode. Growth rates in one year after the fiscal stimulus episodes are well above the average rate during the entire period examined. The growth rate is not negative in 1991, while it is negative in 1999 and 2009. The confidence index declines during all stimulus episodes, but it improves significantly after the episodes of 1991 and 2007-2009. The trade balance improves during the all stimulus episodes, but especially during 1999 and 2007-2009. We think that further and more detailed research is needed to shed light on fiscal stimulus episodes in Turkey.

6. CONCLUSION

In this paper we examine the fiscal adjustment and stimulus episodes in Turkey over the period 1986-2012. We identify the episodes by considering both the changes in the primary balance and cyclically adjusted primary balance. We find that fiscal adjustment episodes take place in 1994, 1998, 2000, 2003-2005 and 2010-2011 while fiscal stimulus episodes experienced in 1991, 1999 and 2007-2009. Fiscal adjustment episodes in 1994, 2003-2005 and 2010-2011 are largely based on spending declines while the other two episodes mainly relied on revenue increases. The fiscal adjustment episodes of 1994, 2003-2005 and 2010-2011 are successful while remaining two episodes are unsuccessful. Also episodes of 2003-2005 and 2010-2011 are significantly expansionary while the other ones are not expansionary.

Our results seem to be consistent with the finding that spending based adjustments tend to be more successful and expansionary than revenue based adjustments. It seems that the composition of fiscal adjustment may be more important than the size of it. Also our results show that longer term adjustments have a higher probability of being successful and expansionary.

We evaluate some important macroeconomic indicators before, during and after fiscal adjustment and stimulus episodes. During successful and expansionary episodes of 2003-2005 and 2010-2011 improvements in expectations as reflected by the confidence index are noteworthy. During both of the expansionary episodes the increase in private investment is remarkably high. Our findings may be regarded as a sign of the effectiveness of the expectation channel. Interestingly the trade balance deteriorates in the expansionary episode of 2003-2005. We find that successful and expansionary fiscal adjustments do not seem to be associated with any political costs while unsuccessful or unexpansionary ones do. Also single party governments seem better at implementing longer term, successful and expansionary fiscal adjustment programs than coalition governments. This result is reasonable and in line with the some other findings in the literature.

As for fiscal stimulus episodes, the episode of 1991 is, at the margin, expansionary while the remaining two are not. During and after all the stimulus episodes, there are increases in both spending and revenue sides. However all fiscal stimulus episodes are relied on spending side mostly. The behavior of the private spending and consumption is intriguing. During all episodes, substantial decreases are recorded in the private investment. Finally we would like to point out that Turkish case clearly shows that expansionary fiscal adjustments are not a fiction but an obvious reality. However it should be kept in mind that there is no simple recipe or panacea that will easily make every fiscal adjustment expansionary. There are many factors, including the design, composition, size of the adjustment as well as political determination and structural reforms, behind expansionary fiscal adjustments.

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Appendix 1: Fiscal Indicators During Fiscal Adjustment Episodes (% of GDP)

	Debt	Total Bal.	Primary Bal.	Total Spen.	Primary Spen.	Govern. Wages	Non-Int. Transfers	Total Rev.
1) 1994								
Before: 1992-93 (a)	30,1	-4,1	-0,5	16,9	13,3	6,4	3,4	12,8
During: 1994 (b)	40,0	-2,9	2,8	17,3	11,6	5,3	3,5	14,4
After :1995-96 (c)	33,1	-4,6	1,9	18,2	11,7	4,9	4,2	13,6
Difference: b-a	9,9	1,2	3,3	0,4	-1,7	-1,1	0,1	1,6
c-a	3,0	-0,5	2,4	1,3	-1,6	-1,5	0,8	0,8
2) 1998								
Before: 1996-97 (a)	33,2	-6,0	0,7	20,3	13,7	5,1	5,3	14,4
During: 1998 (b)	31,0	-5,4	3,4	22,2	13,4	5,5	4,6	16,8
After :1999-2000 (c)	39,5	-8,3	2,9	27,4	16,2	6,3	6,2	19,1
Difference: b-a	-2,2	0,6	2,7	1,9	-0,3	0,4	-0,7	2,4
c-a	6,3	-2,3	2,2	7,1	2,5	1,2	0,9	4,7
3) 2000								
Before: 1998-99 (a)	35,9	-7,1	2,4	24,5	15,0	6,1	5,5	17,5
During: 2000 (b)	38,2	-7,9	4,3	28,0	15,8	6,0	6,1	20,1
After : 2001-2002 (c)	71,6	-11,8	4,2	33,3	17,3	6,5	6,8	21,5
Difference: b-a	3,7	-0,8	1,9	3,5	0,8	-0,1	0,6	2,6
c-a	35,7	-4,7	1,8	8,8	2,3	0,4	1,3	5,0
4) 2003-2005								
Before: 2001-02 (a)	71,6	-11,8	4,2	33,3	17,3	6,5	6,8	21,5
During: 2003-05 (b)	56,6	-5,2	4,8	26,2	16,2	5,6	6,1	21,0
After :2006-2007 (c)	42,5	-1,1	4,8	23,8	17,9	5,1	7,0	22,7
Difference: b-a	-15.0	6,6	0,6	-7.1	-0.9	-0,9	-0,7	-0,5
c-a	-29,1	10,7	0,6	-9,5	0,6	-1,4	0,2	1,2
5) 2010-2011								
Before: 2008-09 (a)	43,2	-3,7	1,8	26,0	20,5	5,5	8,5	22,3
During: 2010-01 (b)	41,5	-2,5	1,3	25,5	21,7	5,6	8,9	23,0
After :2012-13[7] (c)	37,6	-1,5	1,3	24,8	22,0	6,1	9,1	23,3
Difference: b-a	-1,7	1,2	-0,5	-0,5	1,2	0,1	0,4	0,7
c-a	-5,6	2,2	0,0	-1,2	1,5	0,6	0,6	1,0

[7] Due to the lack of data for 2013 only data for 2012 is used.

Appendix 2: Macroeconomic Performance During Fiscal Adjustment Episodes[8]

	Growth	Unemp.	Private Cons.	Private Invest.	Public Cons.	Public Inv.	Trade Bal.	Exc. Rate	Int. Rate	Con. Index
1) 1994										
Before: 1992-93 (a)	7,0	9,2	5,9	21,9	3,6	6,7	-4,9	62,3	87,6	100,2
During: 1994 (b)	-5,5	9,1	-5,4	-12,5	-5,5	-30,2	-2,4	170,4	164,4	84,1
After :1995-96 (c)	7,1	7,6	6,7	15,9	7,7	2,9	-5,0	65,6	128,5	104,2
Difference: b-a	-12,5	-0,1	-11,3	-34,4	-9,1	-36,9	2,5	108,1	76,8	-16,1
c-a	0,1	-2,4	0,8	-6,0	4,1	-3,8	-0,1	3,3	40,9	4,2
2) 1998										
Before: 1996-97 (a)	7,3	7,2	8,4	13,3	6,4	26,4	-5,1	82,1	131,2	103,5
During: 1998 (b)	3,1	7,4	0,6	-8,8	7,9	13,8	-5,2	71,7	122,5	89
After :1999-2000 (c)	1,7	7,6	3,0	-0,8	4,8	6,2	-6,1	55	73,8	94,1
Difference: b-a	-4,2	0,2	-7,8	-22,1	1,5	-12,6	-0,1	-10,4	-8,7	-14,5
c-a	-5,6	0,4	-5,4	-14,1	1,6	-20,2	-1,0	-27,1	-57,4	-9,4
3) 2000										
Before: 1998-99 (a)	-0,1	7,8	0,4	-13,9	5,9	4,4	-4,6	66,6	116,0	88,1
During: 2000 (b)	6,8	7,0	17,5	17,5	5,7	17,5	-8,3	48,5	38,0	101
After : 2001-2002 (c)	0,2	9,9	-0,9	-8,0	2,4	-6,0	-2,2	59,7	80,0	89,4
Difference: b-a	6,9	-0,8	17,1	31,4	-0,2	13,1	-3,7	-18,1	-78	12,9
c-a	0,3	2,1	-1,3	5,9	-3,5	-10,4	2,4	-6,9	42	1,3
4) 2003-2005										
Before: 2001-02 (a)	0,2	9,8	-0,9	-8,0	2,4	-6,0	-2,2	59,7	80,0	89,4
During: 2003-05 (b)	7,7	10,8	9,7	26,2	2,0	1,1	-5,7	-3,8	29,2	104,6
After :2006-2007 (c)	5,8	10,2	5,1	8,8	5,0	4,5	-7,5	-1,2	18,5	106,9
Difference: b-a	7,5	1,0	10,6	34,2	-0,4	7,1	-2,5	-63,5	-50,8	15.2
c-a	5,6	0,4	6,0	16,8	2,6	10,5	-5,3	-60,9	-61,5	17,5
5) 2010-2011										
Before: 2008-09 (a)	-2,1	12,5	-1,3	-15,8	4,8	6,1	-5,6	9,5	16,0	88,7
During: 2010-11 (b)	9,0	10,8	3,6	28,0	3,3	7,8		4,1	8,6	110,4
After :2012-2013[9] **(c)**	2,2	9,2	-0,6	-4,8	6,1	9,3		6,0	8,8	106,9
Difference: b-a	11,1	-1,7	4,9	43,8	-1,5	1,7		-5,4	-7,4	21,7
c-a	4,3	-3,2	0,7	11,0	1,3	3,2		-3,5	-7,2	18,2

[8] The figures on the components of GDP, trade balance and interest rate, exchange rate are % changes. Interest rate is the average compounded nominal rates on domestic borrowing. Values of confidence index denote annual averages.

[9] Except in the case of exchange rate and confidence index (for those two indicators data is available until the end of october 2013) only data for 2012 is used. For the trade balance consistent data is not available also for 2011 and 2012.

Appendix 3: Fiscal Indicators During Fiscal Stimulus Episodes (% of GDP)

	Debt	Total Balance	Primary Balance	Total Spen.	Primary Spen.	Government Wages	Non-Int. Transfers	Total Rev.
1) 1991								
Before: 1989-90 (a)	28,1	-2,3	0,3	12,8	10,2	4,6	2,4	10,5
During: 1991 (b)	27,9	-3,9	-1,1	15,6	12,8	5,0	2,1	11,7
After :1992-93 (c)	30,1	-4,1	-0,6	16,9	13,3	6,4	3,4	12,8
Difference: b-a	-0,2	-1,6	-1,4	2,8	2,6	0,4	-0,3	1,2
c-a	1,9	-1,8	-0,9	4,1	3,1	1,8	1,0	2,3
2) 1999								
Before: 1997-98 (a)	32,0	-5,6	1,7	21,5	14,2	5,4	5,3	15,9
During: 1999 (b)	40,8	-8,7	1,5	26,9	16,6	6,6	6,4	18,1
After :2000-2001 (c)	56,1	-10,0	4,7	30,8	16,1	6,2	6,2	20,8
Difference: b-a	7,2	-3,1	-0,2	5,4	2,4	1,2	1,1	2,2
c-a	13,9	-4,4	3,0	9,3	1,9	0,8	0,9	4,9
3) 2007-2009								
Before: 2005-2006 (a)	48,3	-0,9	5,6	23,0	16,5	4,9	6,0	22,1
During: 2007-2009 (b)	43,2	-3,0	2,6	25,4	19,8	5,4	8,2	22,4
After : 2010-2011 (c)	41,5	-1,3	1,3	25,5	21,7	5,6	8,9	23,0
Difference: b-a	-5,1	-2,1	-3,0	2,4	3,3	0,5	2,2	0,3
c-a	-6,8	-0,4	-4,3	2,5	5,2	0,7	2,9	0,9

Appendix 4: Macroeconomic Performance During Fiscal Stimulus Episodes[10]

	Growth	Unemp	Private Cons.	Private Invest.	Pub. Cons.	Public Invest	Trade Bal/GDP	Exc. Rate	Int. Rate	Con. Index
1) 1991										
Before: 1989-90 (a)	4,8	8,8	0,1	12,1	4,4	6,2	-3,8	36,1	56,9	93
During: 1991 (b)	0,9	8,7	2,7	1,9	8,0	-2,3	-3,6	59,9	80,5	87,4
After :1992-93 (c)	7,0	9,2	5,9	21,9	6,1	6,7	-4,9	62,3	87,6	100,2
Difference: b-a	-3,8	-0,1	2,6	-10.2	3,6	-8,5	0,2	23,8	23,6	-5,6
c-a	2,2	0,4	5,8	9,8	1,5	0,5	-1,1	26,2	30,7	7,2
2) 1999										
Before: 1997-98 (a)	5,3	7,4	4,5	2,1	6,0	21,0	-5,6	79,2	124,9	96,9
During: 1999 (b)	-3,4	8,2	0,1	-19,0	4,0	-5,1	-3,9	61,6	109,5	87,2
After :2000-2001 (c)	0,5	8,0	-0,4	-7,7	2,3	-1,3	-5,0	72,5	67,1	88,9
Difference: b-a	-8,7	0,8	-4,4	-21,1	-2,0	-26,1	2,7	-17,6	-15,4	-9,7
c-a	-4,8	0,6	-4,9	-9,8	-3,7	-22,3	0,6	-6,7	-57,8	-8,0
3) 2007-2009										
Before: 2005-2006 (a)	7,6	10,4	6,2	15,6	5,5	13,8	-7,3	0,5	17,6	102,6
During: 2007-2009 (b)	0,2	11,8	1,0	-9,6	5,4	6,1	-6,1	3,3	16,9	96,3
After : 2010-2011 (c)	9,0	10,9	7,2	28,0	3,3	7,8		4,1	8,6	110,4
Difference: b-a	-7,4	1,4	-5,2	-25,2	-0,1	-7,7	-1,2	2,8	-0,7	-6,3
c-a	1,4	0,5	1,0	12,4	-2,2	-6,0		3,6	-9,0	7,8

[10] The figures on the components of GDP, trade balance and interest rate, exchange rate are % changes. Interest rate is the average compounded nominal rates on domestic borrowing. Values of confidence index denote annual averages.