

# **Empirical Findings on Triplet Deficits Hypothesis:**

## **The Case of Turkey**

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### **Abstract**

1980 - 2010 covering the period of this study, triplet deficits clear whether the concept applies in Turkey were investigated. In this respect, the first of the series stagnation order to unit root tests are completed. Then, in order to determine the direction of the relationship between variables “Dolodo-Lütkepohl Granger Causality Analysis” was. In addition, the VAR analysis and the variables interact with each other in order to determine the degree of the variance decomposition and Impulse - Response analysis was applied. As a result, the current account deficit and budget deficit are causality to savings deficit.

**Keywords:** Current Account, Budget, Saving - Investment, Triplet Deficit, Dolodo, Lutkepohl, Granger, Turkey.

**JEL Classification:** F32, F47, H68, O16.

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## **1. Introduction**

That the budgets balance making up the income-expense balance of countries results in high levels on the expense side is called budget deficit. On the other hand, that having a deficit of current balance consisting of goods, services, income-expense balance and currents is also called current deficit. In addition to all these, with the addition of country's total investment and savings into this balance, there emerged the triplet deficit concept (Senturk and Eksi, 2010:339). In the Economy literature, according to the triplet deficit hypothesis explaining the relationship amongst budget deficits, current deficits and investment-saving deficits, there is a positive relationship among these deficits.

High level current deficits accompanied with high level budget deficits in the US Economy starting from 1980s brought about the concept of "Twin Deficits". The view claiming the fact that there is a positive relationship between these two deficits is called "Twin Deficit Hypothesis". The economies presenting both fiscal and current deficits are seen to have twin deficit. The U.S. has been fallen into this case for a long time. Contrary to this, opposite scenarios presenting fiscal and current profit stand for a better financial position. China has always been emphasized as an example of a country presenting long term financial and current profit.

As a prerequisite for mentioning that there is macro economical balance in a country, there should be a balance of budget, current and saving-investment. Keeping a balance amongst these three macro economical variable is a basic problem not only for developing countries but also for developed countries. The liberation movements that emerged not only in the Turkish economy after 1980s but also all around the World and that affected the entire World led to the macro economical problems because of the current deficit, budget deficit and the inequality in saving-investment.

## **2. The Emergence of "Triplet Deficits" Concept**

The prerequisite of a sustainable economic growth is the control of current deficits and budget deficits. Nevertheless, it is quite difficult for the developed and developing countries to realize this prerequisite. The idea that budget deficits and current deficits are problems of a World economy where the capital is mobile gained importance and then Twin Deficit concept was discussed both on

theoretical and on applied basis. The twin deficits, was discussed much in 1980s but then was suspended for a decade, finally it came to the foreground in the financial policy discussions again in 2000s. (Yay and Tastan, 2007:88). The relationship between budget deficit and current deficit so called “Twin Deficit Hypothesis” in the economy literature is a hypothesis sometimes applied as bi-directional and sometimes as one directional. While the theoretical and empirical discussions on this hypothesis are going on, the addition and interaction of savings-investment inequality to this deficit creates the triplet deficits concept.

According to Vyshnyak (2000), the mechanism providing the interaction between budget and current deficit works on foreign exchange. A country presenting current deficit most probably chooses foreign indebtment in order to finance this deficit. This means that a portion of the future income will be transferred abroad. Then, on one hand there is budget deficit due to indebtment and on the other hand fluctuation in the foreign exchange makes the economy fragile. As a matter of fact, an economy using stable exchange regime and financing the external deficits via indebtment may be exposed to payment schedule crisis with the volatility in the exchange rates. In a smaller and outward oriented economy where there is flexible exchange rates and full capital mobility an increase in the government spendings also increases the interest rates in the internal economy. Due to the fact that the internal interest rate is higher than the world rate, capital flow speeds up and the value of national currency goes upwards. As a result, demand for imported goods that became cheaper because of the fall of the exchange rate increases and export decrease, and this has a wide effect on current deficit.

In order to express the triplet deficits in an equation, first of all, what a macro economic balance is should be defined in an open economy. The Triplet Deficit concept expresses the related balance of saving-investment deficit, budget deficit and current deficit, which are one of the most important macro economical growth signals of a country. The equational proof of this economical case is possible with Keynesian spending equation. According to this, the condition of balance in macro economical terms is shown as in the equation of:  $Y = C + I + G + XN$  (Danisman, 2009:19).

Y: Gross Domestic Product      C: Consumption Spendings

I: Investment Spendings      G: Public Spendings

XN: Net Export

$$(S-I) + (T-G) = (X-M) \quad (1)$$

S: Total Domestic Savings      T: Tax Income

X: Total Export                      M: Total Import

when equation 1 is expressed as below;

$$Y = C + I + G + (X - M) \quad (2)$$

In the equation 2, it partially returns the balance of current account when the unrequited transfers are ignored.

$$\text{Balance of Current Accounts; } X - M \quad (3)$$

In outward oriented open economies total savings is equal to the addition of national savings and external savings.

$$S(T) = S(D) + S(F) \quad (4)$$

T: Total                      D: Domestic                      F: Foreign

National savings are the addition of private sector and public savings in closed economy case.

External savings are given by equation 3.

$$S(D) = S(P) + S(G) \quad (5)$$

P: Privacy Sector

G: Government Sector

$$S(F) = XN \quad (6)$$

The explanation of private sector and public savings are as below:

$$S(P) = Y - T - C \quad (7)$$

$$S(G) = T - G \quad (8)$$

To sum up under the light of those data, to write the total savings again;

$$S = ( Y - T - C ) + ( T - G ) + ( X - M ) \quad (9)$$

is obtained as equation. When this equation is rearranged, we come up with equation number 1.

$$S(P) + S(G) = \text{Current Account Balance} \quad (10) = (1)$$

According to basic Keynesian model, this equation derived from the balance conditions of goods market in the open economies shows that there is a relationship among Domestic Public

Savings Balance, Public Budget Balance and Current Account Balance. As can be predicted, it is possible that these three macro economic balance result in deficit or vice versa or balance.

When random two of these accounts result in deficit, we can talk about the presence of “Twin Deficit”, when three of them result in deficit, then we can talk about the presence of “Triplet Deficits”.

In this respect, in order to use the concepts of twin and triplet deficits, it is not enough for the accounts to be in debt. They should also affect each other single or bidirectionally. (Danisman, 2009:20). According to this, foreign trade and budget deficits of a country result from investment-saving instability and income increase is also possible via the mutiplification of the investments and demand in imported goods rises. As a result, foreign trade deficits emerge. According to twin deficit hypothesis, even if the taxes are lowered, people might make savings by thinking that they are going to pay that and in parallel to this logical relationship, changes in the budget balance are not going to affect foregin trade balance. (Celik et al., 2008).

### **3. Literature Review**

There are not many studies in literature related to “the Triplet Deficits Hypothesis” but there are different views on twin deficits. Our study will be a pioneering study by adding saving-investment balance to the “twin deficit” model. For instance, in Keynesian Theory and Mundell-Flemming Models it is stressed that there is a reationship between budget and current deficit while in Ricardo Equation Theory it is not proposed that there is a relationship between budget and current deficits.

There are two mechanisms underlying the Keynesian point of view. According to first of these, higher levels of budget deficits increase the interest rates due to growing money demand. According to the second one, budget deficits increasing in parallel to pulic spendings also increase the spendable income via multiplication mechanism. As a result, interest rates increase and short term capital movements also speed up. This case leads to an increase in money demand in stable foreign exchange system and slows the export in flexible foreign exchange system by increasing import since the local currency becomes more valuable and therefore imbalances the current account. The increase of spendable income also imbalances the current account by increasing the demand in import goods.

Ay et. al. (2004) tested the relationship between two deficits for the 1992 – 2003 period using Granger Causality and Regression Analysis. The writers showed that there is a mutual interaction between budget and current deficits and therefore that the Keynesian Traditional View is also valid for Turkey covering the period studied.

Another study confirming the traditional Keynesian point of view was done by Sever and Demir (2007). In the Turkish practice, the rate of Public sector borrowing requirement to Gross Domestic Product, the Interest rate of government debt securities, Consumer Price Index based Real Effective Exchange Rate and the rate of current deficit to Gross Domestic Product were evaluated for the periods of 1987 to 2006. According to Granger Causality Test results of this study, the traditional Keynesian point of view is confirmed. Namely, budget deficits increase interest rates; the increased interest rates make the local currency more valuable and as a natural result of this, current deficits emerge.

Vyshnyak (2000), points to the non-productive government expenditures as the reason for current deficit in Ukraine. As a result of the time series analysis for the USA, Canada, Great Britain and Western Germany, it was put forward that there is an interaction between budget and current deficit.

According to Gok and Altay (2007) who used Johansen co-integration test for the 1989-2005 period, no evidence supporting the twin deficit was found. Yet some statistical evidence in the direction of transfer mechanism forecasted was found by Action-Reaction and Variance Parsing analysis that prove Twin Deficit Hypothesis is true. This is in accordance with the Keynesian Income-Consumption view. In summary, in this study, the twin deficit hypothesis is not valid for the 1989-2005 period in the Turkish economy in terms of long periods but it is possible to say that it was valid for a short term. The traditional Keynesian approach shows the interaction of budget deficits emerging from the increased public spendings and decreased taxes on current balance (Erdinc, 2008:212).

Relating to 1996-2006, according to Celik et al. (2008) who carried out panel co-integration analysis on Czech Republic, Brazil, Mexico and Columbia, countries showing similar economic features, in the participants' economies long term foreign trade and budget deficits are co-integrated.

Shortly, as far as 6 countries are concerned, the Ricardian Equation Hypothesis was rejected and it was put forward that there had been long term twin deficit relationship for these countries.

Another panel co-integration analysis was carried out by Yilgor (2008) for 29 OECD countries. According to this study, it was found that budget and foreign trade deficits affect each other mutually and that there has been a co-integration in a long term.

Surekci (2011) who analysed the triplet deficit using Vector Autoregressive Model studied Turkey's 1987:1-2007:3 period data. The findings of the study Show that the variables that have a causality relationship towards current deficit are real exchange rate noninterest public borrowing and internal growth. The variables mentioned are the causes of current deficit in the meaning of Granger. There wasn't a relationship discovered from current deficit to these three variables. In this study, the results of variant research of current deficit supported the causality relationship and Show that the variables mentioned are effective on the current deficit. Variant reseach and cause-effect functions so that the current deficit might be effective on investment-saving rate.

Finally, in their empirical studies, Zaman and Costa (1990) who studied on high budget and foreign trade deficits for 1980s in the USA put forward that high budget deficits causes high trade deficits.

#### **4. The Triplet Deficits Problem in Turkey**

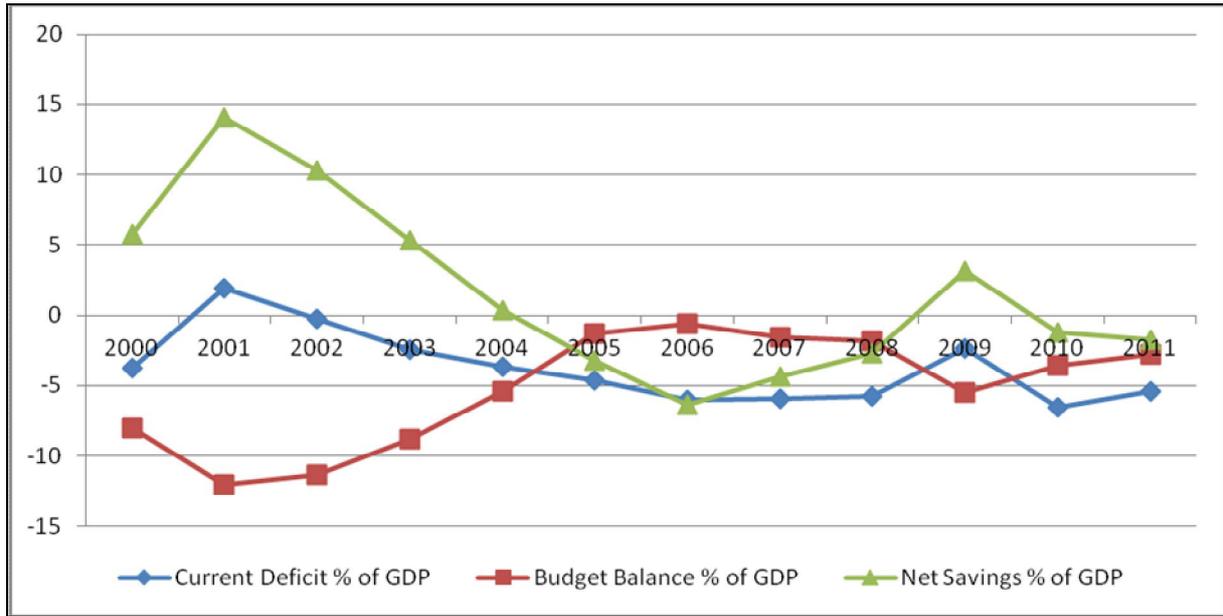
The variables of the "Triplet Deficit" concept - budget deficit, current deficit and saving-investment inequality as well as their interaction – points to macro economical instability. In the crisis emerged with the beginning of capital and expansion movements in 1980s in Latin America, Mexico and South Eastern Asia and in 1990s in Turkey where the liberation period was completed a bit later than the others, budget and current deficits gained great importance.

A case showing that budget deficits and current deficits have an opposite relationship so called twin deviation can be experienced in some periods and is very common for the recent data of the recent studies. The major reason of this is temporary seasonal changes happening in bugdet sizes, high real interst rates and exchange rates. The situation in the Turkish economy data after 2001 also shows a sample of this case (Danisman, 2009:2). When the study's data were taken into consideration, the

correlation between saving-investment deficit and current deficit in the period following 2000 in Turkey made it a must to query the triplet deficit problem.

According to Kumcu, the saving balance is defined as the difference between savings and investments. In Economy, if savings of a section is less than investments then another section's savings must be more than investments, for sure. If we classify economy into three categories – public, private and foreign – the total of public and private savings balance should be equal to current balance (Kumcu, 2010). Moreover, for a rapid development, the ratio of investments to gross domestic product should increase. Definitions and cause and effect relationships in Finance reflects the observations carried out under certain circumstances and environments. One of these observations is that currents are equal to savings deficit. Many of the similar studies were carried out in developed, hard currency countries and in environments where capital moves for financing real sector investments. That current deficit equals to savings deficit doesn't reflect a general case but a special one. For example, this balance is not valid for Turkey where there is fluctuation in the currency rate because the orthodox Money policy that can be summarized as high interest rate for national Money results in opposite to what is expected. Under such conditions it is better to say that current deficit is equal to production excess (Cansen, 2008).

**Figure 1. Budget, Saving-Investment and Current Account Balances Development in Turkey**



Resource: Senturk and Eksi, 2010: 346.

As can be seen in Figure 1, when 2000 to 2010 period was studied, it can be seen that budget balance is more volatile when compared to current deficit and saving-investment balance. Besides, the correlation between investment-saving balance and currents is also important. Still, the break in these numbers in 2001 is an important indicator of how crisis damaged the economy. The basic factor in the decreased current deficit within a year after the 2001 crisis is the increase in foreign capital in Turkey. In 2008 when crisis hit globally, the increase in the foreign trade deficit and current deficit as well as savings-investment deficit draws the attention. These two variables even move together. The decreases in the deficits seen in 2009 are the reflections of stagnation and the inactive capacity in crisis period (Senturk and Eksi, 2010:345-346).

## 5. Data and Methodology

In this study, in order to test if there is a relationship between private sector annual net saving gap (TA) and consolidated budget deficit (BA) and current deficit (CA), firstly their stagnation belonging to the series of the three variables is taken into consideration. To ensure this ADF, PP and KPSS unit root tests were carried out. After testing the stagnation of these three variables, the Variant

decomposition results explaining the explainability rate of a variable using another one were obtained by using VAR analysis. Finally, within the VAR model framework, in order to observe the shocks occurring in the error terms of the series to another series, Impulse - Response analysis has been used. In testing these relationships, the series consisting of data from the Turkish Statistical Institute (TUIK) and Central Bank of the Turkish Republic were analysed by relating them to GDP. TA stands for the rate of collected data to GDP and BA stands for the rate of consolidated budget sums to GDP.

## 5.1. Unit Root Tests

In this study, in order to test the stagnation of savings deficit, budget deficit and current deficit series ADF, PP and KPSS unit root tests were used.

### 5.1.1. Phillips Perron Unit Root Tests

The Phillips-Perron test is in the literature as a unit root test completing the ADF test, rather than being an alternative to it. In the ADF test, it is assumed that random error distribution is statistically independent and stable variant. Phillips Perron (1988) offered a new assumption by developing the idea of random error distribution. According to this, the PP approach takes into consideration the unknown types of autocorrelation and the conditionally changing variant case in the error terms and use a non-parametric correction for serial relationship (Enders, 2004: 251). PP test can be carried out in three different regression model, just as in the ADF model but the most basic model (AR1) for PP test can be defined as below:

$$Y_t = \mu + \phi_1 Y_{t-1} + \varepsilon_t \quad (1)$$

In the PP test, just as in the ADF test, additional regressions are rearranged according to their trend and intercept and only intercept phases. Yet, the critical values to be used in both test will be different. Therefore, the formula for PP test is as follows:

$$Z\alpha = T(\hat{\phi}_1 - 1) - CF \quad (2)$$

The converted format of the T statistics in the PP test is as follows:

In the PP test,

### 5.1.2. KPSS Unit Root Tests

$$\hat{t}_\alpha = t_\alpha \left( \frac{Y_0}{f_0} \right)^{-1/2} - \frac{T(f_0 - Y_0)(S_0(\hat{\alpha}))}{\alpha f_0^{1/2} S} \quad (3)$$

The purpose in the KPSS test is to stagnate the series by purifying the deterministic trend in the series observed. The unit root hypothesis in the KPSS test is different from the one for ADF and PP. H=0 hypothesis shows that the series is stagnated and the alternative hypothesis Shows that there is unit root in the series (Kwiatkowski et.al., 1992:159).

The equation for the test is as follows:

$$Y_t = X_t' \delta + Ut \quad (4)$$

$x_t'$  is a stable or stable and trend deterministic component.

**Table1. ADF-PP and KPSS test results for TA-BA and CA (Constant)**

Unit Root Tests						
Variables	ADF		PP		KPSS	
	Level	1st Difference	Level	1st Difference	Level	1st Difference
TA	-2.537545 (0)	-5.02250(0)	-1.8772 (1)	-5.0225 (0)	0.20923 (3)	0.09384 (0)
BA	-1.888387 (0)	-4.81000(0)	-1.94105 (1)	-4.81000 (0)	0.14050 (3)	0.11573 (0)
CA	-2.537545 (0)	-6.40688(1)	-2.38456 (1)	-21.6073(22)	0.57605 (3)	0.31612 (13)
Critical Values of ADF ve PP Test Statistics			Critical Values of KPSS Test Statistics			
% 1	-3.737853		0.739000			
% 5	-2.991878		0.463000			
% 10	-2.635542		0.347000			

1-) The values in brackets Show the lag length chosen according to SIC criteria.

2-) For PP and KPSS tests, the values in brackets Show the bandwidth determined according to Newey-West predictor applied using Bartell Kernel method.

**Table 2. ADF-PP and KPSS test results for TA-BA and CA (Trend)**

Unit Root Tests						
Variables	ADF		PP		KPSS	
	Level	1st Difference	Level	1st Difference	Level	1st Difference
TA	-2.115944 (0)	-4.9829(0)	-2.14084 (1)	-4.98291(0)	0.118506(3)	0.051141(0)
BA	-1.861760 (0)	-4.81876(0)	-1.89644 (1)	-4.81871 (0)	0.138799(3)	0.052221(0)
CA	-4.706059 (0)	-6.24007(1)	-4.70679 (1)	-23.069 (22)	0.14017 (0)	0.32734(12)
Critical Values of ADF ve PP Test Statistics			Critical Values of KPSS Test Statistics			
% 1	-4.394309		0.216000			
% 5	-3.612199		0.146000			
% 10	-3.243079		0.119000			

1-) The values in brackets Show the lag length chosen according to SIC criteria.

2-) For PP and KPSS tests, the values in brackets Show the bandwidth determined according to Newey-West predictor applied using Bartell Kernel method.

## 5.2. Dolado-Lütkepohl Granger Causality Analysis

The main advantage of Causality Test created using manipulated Wald test by Dolado and Lutkepohl (1996) is that it takes unit root tests into consideration when looking for the causality relationship amongst variables (Booth and Ciner, 2005). If the variables in VAR model are I(1), the  $\chi^2$  and F tests result in asymptotic distribution. Especially the Wald test used in Granger Causality Test can lead to non standard distributions in connection with the co-integration features of the system. The zero limitation within co-integrated VAR procedures used in non standard asymptotic features can be related to the singularity in predictors' asymptotic distribution (Lutkepohl and Kratzig, 2004). Dolado-Lütkepohl (1996) overcome the problems in standart Granger Causality test taking if the variables are unified or co-integrated. This approach depends Wald test application showing asymptotic features on unified/co-integrated VAR coefficients (Ciarreta and Zarraga, 2009). Singularity problem destroys the non singular distribution problem in VAR coefficients with the addition of lag into the optimal delayed limited VAR model. With an additional delays to optimal Dolado-Lütkepohl Causality Analysis VAR model, this problem is eliminated. Dolado-Lutkepohl Granger Causality Test consist of two phases. Firstly, VAR(p) model having optimal delay using SBC (Schwarz Bayesian Criterion) is predicted. Then, modified Wald test is done by predicting VAR(p+1).

The most important step in Dolado-Lutkepohl Causality Test is the first step due to the fact that Causality Test is sensitive to the delay number. According to this, VAR(3) model using SBC criterion can be expressed as:

$$\begin{bmatrix} \ln TA_t \\ \ln CA_t \\ \ln BA_t \end{bmatrix} = \begin{bmatrix} \alpha_1 \\ \alpha_2 \\ \alpha_3 \end{bmatrix} + \begin{bmatrix} \beta_{11,1} & \beta_{12,1} & \beta_{13,1} \\ \beta_{21,1} & \beta_{22,1} & \beta_{23,1} \\ \beta_{31,1} & \beta_{32,1} & \beta_{33,1} \end{bmatrix} \begin{bmatrix} \ln TA_{t-1} \\ \ln CA_{t-1} \\ \ln BA_{t-1} \end{bmatrix} + \begin{bmatrix} \beta_{11,2} & \beta_{12,2} & \beta_{13,2} \\ \beta_{21,2} & \beta_{22,2} & \beta_{23,2} \\ \beta_{31,2} & \beta_{32,2} & \beta_{33,2} \end{bmatrix} \begin{bmatrix} \ln TA_{t-2} \\ \ln CA_{t-2} \\ \ln BA_{t-2} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \\ \varepsilon_{3t} \end{bmatrix} \quad (5)$$

According to this notation, the zero hypothesis created as  $H_0: \beta_{11,1}=0$  is not the reason for current and saving deficit and it can be said that  $H_0: \beta_{12,1}=0$  is not the reason of saving deficit.

**Table 3. Dolodo-Lütkepohl Granger Causality Test Results**

Hypothesis	Delay Length	MWALD	p- value	Causality
CA→BA	1 (9.416)*	1.504	0.254	Rejected
BA→CA		2.453	0.094	Rejected
TA→BA	1 (9.827)*	4.200	0.019	<b>Accepted</b>
BA→TA		4.044	0.002	<b>Accepted</b>
TA→CA	1 (9.531)*	9.280	0.001	<b>Accepted</b>
CA→TA		10.181	0.001	<b>Accepted</b>

\* The values in brackets show the least Schwarz criterion for optimal delay length.

According to Dolodo-Lutkepohl Granger Casualty Test, there is not a causality from current and budget deficit to saving deficit. Namely, it doesnt affect current and budget deficit. Besides this, there is a causality from saving deficit to current deficit. The bidirectional causality between saving deficit and current deficit is of great importance. Shortly, saving deficit leads to a decrease in investments via multiplying effect and this leads to current deficit because of weak export. On the other hand, the current deficit in the economy finds a reply from negative savings and put the economy in a infinite loop. At this point, economy policies are getting important. As a matter of fact, a life vest such as market variation in export, stimulus facilities, long term and low cost financing options might be needed to be introduced.

### 5.3. VAR Analysis

The VAR model handles all the economic notions as a whole. To make it clear, econometric variables or notions done using the model discussed are evaluated simultaneously. This model is able to return dynamic relationships without any limitation on the structural model and therefore is used for time series frequently (Keating, 1990:453-454). The VAR model mostly used in economic studies about time series is differentiated from simultaneous equation systems since it doesn't require any internal-external differentiation (Charemza and Derek, 1992:182). Moreover, the presence of delayed values of dependent variables in the VAR models makes it possible to make strong predictions about future (Kumar, et. al. 1995:365).

In the VAR analysis developed by Sims (1980) variables are considered as dependent variables in order. The dependent variable is regressed with an optimal delay length over the delayed

values of itself and other variables. In an example with three variables, the VAR system can be shown as below:

$$\Delta BA_t = \alpha_1 + \sum_p^k \beta_{1p} \Delta TA_{t-p} + \sum_p^k \mu_{1p} \Delta CA_{t-p} + \sum_p^k \delta_{1p} \Delta BA_{t-p} + \varepsilon_{1t} \quad (6)$$

$$\Delta CA_t = \alpha_2 + \sum_p^k \delta_{2p} \Delta BA_{t-p} + \sum_p^k \beta_{2p} \Delta TA_{t-p} + \sum_p^k \mu_{2p} \Delta CA_{t-p} + \varepsilon_{2t} \quad (7)$$

$$\Delta TA_t = \alpha_3 + \sum_p^k \mu_{3p} \Delta CA_{t-p} + \sum_p^k \delta_{3p} \Delta BA_{t-p} + \sum_p^k \beta_{3p} \Delta TA_{t-p} + \varepsilon_{3t} \quad (8)$$

In VAR analysis, via variant differentiation of prediction error, it can be diagnosed which variable has the most effect on a variable. Also with cause and effect function, how much the shock applied on a variable has importance on other variables.

**Table 4. Variant Differentiation Table for BA-CA and TA**

<b>Variance Decomposition of BA</b>				
<b>Period</b>	<b>S.E.</b>	<b>BA</b>	<b>CA</b>	<b>TA</b>
1	2.332716	100.0000	0.000000	0.000000
2	2.959996	93.37807	1.487828	5.134098
3	3.412900	83.02112	7.977792	9.001083
4	3.629293	80.09393	11.03437	8.871701
5	3.730392	78.63851	12.94594	8.415542
6	3.780822	77.36992	14.24311	8.386973
7	3.809513	76.41435	15.26893	8.316724
8	3.827194	75.80108	15.95874	8.240182
9	3.838037	75.45192	16.34639	8.201691
10	3.844081	75.28089	16.54132	8.177783
<b>Variance Decomposition of CA</b>				
<b>Period</b>	<b>S.E.</b>	<b>BA</b>	<b>CA</b>	<b>TA</b>
1	2.510975	14.83049	85.16951	0.000000
2	2.712061	20.17775	79.82165	0.000599
3	2.956404	20.55291	79.36722	0.079875
4	3.057949	21.05645	78.83903	0.104520
5	3.125046	21.16138	78.73829	0.100330
6	3.159478	21.19248	78.70344	0.104082
7	3.179853	21.15629	78.73617	0.107540
8	3.191392	21.12394	78.76851	0.107548
9	3.198166	21.10476	78.78815	0.107093
10	3.202039	21.09706	78.79610	0.106839
<b>Variance Decomposition of TA</b>				
<b>Period</b>	<b>S.E.</b>	<b>BA</b>	<b>CA</b>	<b>TA</b>
1	3.933559	43.99485	39.65712	16.34803
2	5.071178	50.25204	29.77356	19.97440
3	5.715170	51.90564	30.71668	17.37768
4	5.967137	52.57698	31.46212	15.96089
5	6.101157	51.70869	32.75185	15.53946
6	6.173457	50.86220	33.88144	15.25636
7	6.219298	50.27099	34.69650	15.03251
8	6.246978	49.95385	35.13520	14.91095
9	6.262527	49.81008	35.35036	14.83956
10	6.270926	49.73995	35.45983	14.80022
<b>Cholesky Ordering: BA CA TA</b>				

The variant differentiation analysis results show parallelism with the Dolado-Lutkepohl Granger Causality Analysis. According to this, other variables do not have a lot of effect on budget deficit. The current deficit has 15% effect on budget deficit and savings deficit has 8% effect. Current deficit returns results similar to budget deficit. The most effective variable in current deficit is the variable itself. The effect of budget deficit and savings deficit on current deficit are 21% and 0.1%

respectively. Both variables are very important on savings deficit. The effect of budget and current deficits on saving deficit are 50% and 32% respectively.

**Table 5. Impulse – Response Analysis Results**

<b>Response of BA</b>			
<b>Period</b>	<b>BA</b>	<b>CA</b>	<b>TA</b>
1	2.332716	0.000000	0.000000
2	1.655243	-0.361050	-0.670692
3	1.220169	-0.893805	-0.773697
4	0.937860	-0.724001	-0.346589
5	0.627228	-0.590012	0.050325
6	0.341366	-0.484213	0.166713
7	0.172677	-0.424132	0.089834
8	0.115554	-0.348794	-0.004300
9	0.107540	-0.265266	-0.034329
10	0.098793	-0.190774	-0.016588
<b>Response of CA</b>			
<b>Period</b>	<b>BA</b>	<b>CA</b>	<b>TA</b>
1	-0.966986	2.317312	0.000000
2	-0.740991	0.707932	0.006640
3	-0.558803	1.032400	0.083290
4	-0.415463	0.659793	0.052843
5	-0.312412	0.563234	0.004950
6	-0.221126	0.408539	-0.024322
7	-0.153989	0.323980	-0.022001
8	-0.110727	0.247351	-0.008938
9	-0.084736	0.190000	-0.000268
10	-0.066647	0.142640	0.000706
<b>Response of TA</b>			
<b>Period</b>	<b>BA</b>	<b>CA</b>	<b>TA</b>
1	-2.609075	2.477115	1.590444
2	-2.473048	1.233175	1.614705
3	-2.007682	1.541499	0.734380
4	-1.329255	1.081477	-0.083984
5	-0.726060	0.994462	-0.318238
6	-0.369160	0.849213	-0.173241
7	-0.245492	0.712560	0.009257
8	-0.222949	0.539378	0.066587
9	-0.201944	0.390797	0.031703
10	-0.157661	0.283308	-0.012172
<b>Cholesky Ordering: BA CA TA</b>			

A unit of positive structural shock given to the error term led to double decrease of saving deficit collectively. This case, as also can be seen in the variant differentiation analysis, shows that changes in the budget deficit have negative and meaningful effect on saving deficit. Moreover, a positive structural shock applied on current deficit increases the saving deficit nearly 1.5 times.

## **6. Conclusion**

Two most important accounts of payments statements are current account and capital account. In both these two accounts, current account makes up the accounts that create instability and the cure for this is capital account. When studied carefully, it can be seen that foreign trade deficit is more than current deficit in Turkey. Due to the fact that the import in Turkey is more than export, the foreign trade limits are in favour. Namely, foreign trade deficits have become inevitable. In addition to this, the handicaps in goods trade is partially eliminated by the opportunities in services trade. Especially, the difference of income-consumption of the main accounts of services trade like workers remittances, tourism and contracting business are mostly in advantage of Turkey, services account surpluses every term. Therefore, current account is smaller than foreign trade account.

Being high in Turkey, the current deficit (even though it is less than foreign trade deficit) weakens the competence power of the Turkish exporters. Comparative disadvantage case that emerges in similar countries like China and India in terms of similar import products and market profiles put the local industry into problems and makes it more fragile. In addition to this, as can be seen in the crisis experiences we have had in our recent history, that the cronical current deficits are financed by the short term portfolio investments and high interests as well as low currency deadlock increased the fragility level of Turkish Economy.

Turkey, after the experiences of the crisis hit in the beginning of 2000s financed the high growth potential with cheap foreign resources. It returned current deficit due to some internal structural factors. What is important at this point is that the deficit turns into growth or not. Shortly, we need to make profit/cost analysis. The same case is also valid for the saving-investment balance. If the saving cannot be converted into investments with right policies or if the cost borne doesn't turn to be benefit, it means that the payments balance is floating towards a deficit.

At this point, it is crucial to mention again that a political error can perish the whole economy like the wave effect of a drop. Shortly, deficit brings deficit. Today, the stable interest and exchange rate policy in Turkey has enabled investors to foresee the future when compared to past and not to avoid investments while it partially stopped the foreign exchange ins and outs and get direct investments from foreign investors. Apart from fluctuating exchange rate depend on fixed bases, trust

created in the market can also easily be seen from interest limits and stability in the foreign exchange rate. Since Turkey learned a lesson from the older crisis experiences and the success to control the financial market making it possible for her not to be affected by the 2008 Global crisis. As much as the others, the latter crisis experience made her the world's 15th biggest economy and diversified the market structure.

### **Acknowledgement**

We thank Lect. A. Celal YASAMALI for his valuable contribution to our translation.

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