PANEL CAUSALITY ANALYSIS OF RELATIONSHIP BETWEEN CURRENT ACCOUNT DEFICIT AND ECONOMIC GROWTH: EXAMPLE OF THE G7 COUNTRIES

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ABSTRACT

The purpose of this study is to determine the causality relationship between the current account deficit and economic growth for the "G7 " countries (Canada, France, Germany, Italy, Japon, United Kingdom and United States). In this context, an empirical model has been developed in the scope of the panel data analysis using annual data for the period of 1980-2012. Firstly, heterogeneity of the variables were investigated using the delta test, and then dependence between cross-sectional units that make series were examined by the CADF test. After the existence of the cointegration relationship between the series proved by using the Westurlund ECM cointegration test, Dumitrescu-Hurlin panel causality test was applied. According to the empirical results, in the long term there are causal relationships from current accounts to economic growth in the G7 countries.

Keywords: Current Account Deficit, Economic Growth, Panel Data Analysis, Panel Causality Analysis.

Jel Codes: F32, F43, C33.

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CARİ İŞLEMLER AÇIĞI VE EKONOMİK BÜYÜME ARASINDAKİ İLİŞKİNİN PANEL NEDENSELLİK ANALİZİ: G7 ÜLKELER ÖRNEĞİ

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ÖZET

Bu çalışmanın amacı, “G7” ülkeleri kapsamında cari açık ve ekonomik büyüme arasındaki nedensellik ilişkisinin belirlenmesidir. Bu bağlamda, panel veri analizi kapsamında, analize konu olan 7 ülkenin (Kanada, Fransa, Almanya, İtalya, Japonya, İngiltere, Amerika) 1980-2012 dönemine ait yıllık verileri kullanılarak ampirik bir model oluşturulmuştur. Öncelikle değişkenlerin heterojenliği delta testi (Pesaran ve Yamagata, 2008) kullanılarak araştırılmış, ardından serileri oluşturan yatay kesit birimleri arasındaki bağımlılık CADF testi ile incelenmiştir. Westurlund ECM eşbütünleşme testi ile seriler arasındaki eşbütünleşik ilişkinin varlığı ispatlandıktan sonra, Dumitrescu-Hurlin(2012) panel nedensellik testi uygulanmıştır. Elde edilen ampirik bulgulara göre, G7 ülkelerinde uzun dönemde cari işlemlerden ekonomik büyümeye doğru bir nedensellik ilişkisinin olduğu görülmektedir.

Anahtar Kelimeler: Cari İşlemler Açığı, Ekonomik Büyüme, Panel Veri Analizi, Panel Nedensellik Testi.

Jel Kodları: F32, F43, C33.

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INTRODUCTION

Since the 1980s, liberalization policies of developing countries are particularly raised the level of integration of the real and financial sectors globally, of course with the fast pace of the technological progress. The main motivation of liberalization is known to be that it helps increasing the national savings, along with an increase of investments and finally enabling fast growth. But it is widely known that liberalizing international capital movements without adequate legislations makes countries fragile and more vulnarable against shocks, causing possible financial crises.

Current account deficit is commonly defined as having expenses more than the income, or in another words, excess investment above savings. This condition simply refer to the situation that the country is indebted to others. Countries with current deficit are expected to have fragile economies and be effected by the shocks easier. One reason of that is unlegislated countries with weak macroeconomic indicators are not protected against speculative-sudden and perhaps with no reason- capital outflows and rapid reversal of the continuing capital inflow may cause a financial crisis.

The aim of this study is to provide an assessment about current deficit and economic growth relationship within major advanced economis, Canada, France, Germany, Italy, Japon, United Kingdom and United States (referred as G7), using the panel data analysis. Firstly, heterogeneity of the variables used in the analysis are delta tested using the Pesaran and Yamagata (2008) formulation, then dependencies of cross-sections in the series are examined. The cointegration within the series is investigated by Westurlund ECM cointegration test.

The paper consists of four sections. In the first section current deficit and growth relationship is investigated throughout the literature. Empirical model are presented in the second part. The third part includes econometric methodology and general information about the data set. In the last part the panel data analysis is conducted and results are presented, just before the conclusion.

1.CURRENT DEFICIT & ECONOMIC GROWTH RELATIONSHIP

The Balance of Payments consists of 4 units. The first component of it is current account, the second one is financial account, the third one is net errors and omissions, and the last one is the official reserve transactions. The difference occuring from adding the first three up together is bringing to zero via the official reserve transactions. When there is a deficit in the current account, the financial account and/or reserve transactions shall generate a surplus to ensure the “balance” of payments. At this point, an important question arises on how to finance a current account deficit. Economically speaking, fragility increases if a current account deficit is financed (or balanced) via borrowing abroad or depends on hot money inflows.

Current account balance is one of the most important macroeconomic indicators for a country. As stated before, one reason to its importance is about possible increase of fragility, and others are its effect on market performance expectations, and whether it is sustainable in the long term. The size of the current account deficit and continuity of this deficit provide negative signs on markets and agents in the market happen to expect crises.

As a straightforward inference, one leg of the relationship between the current deficit and economic growth is fragility of the economy and its possiblity of triggering financial crises. Depending on the fragility which is implied by the current deficit, probable negative effect of a financial crisis on economic growth puts a “keep an eye on” mark on the current deficit. The negative effects of current deficit on investments and growth were also stated in the previous literature (see Edwards 2002, and 2004). Moreover, countries with higher investment rates and less dependent on foreign capital, which implies less current deficit, were claimed to grow faster (Prasad, 2007:161).

There are two main streams in the literature which are focused on sustainability and causality. Sustainability of a current deficit is naturally critical for financial stability and growth. Although there is not a precise sustainability treshold for a current deficit, the concerns arise when it exceeds 5% of the Gross Domestic Product (GDP). Additionally, exchange rate policies, saving and investment rates, financial markets’ stoutness are considered as signs of the sustainability (Milesi-Faretti and Razin, 1996:65). Sustainability also has two mainstreams in the literature. The first one is the national viewpoint which considers consumption and investment, and the second opinion is the international finance standing which debates on the global investors’ portfolios (Kee et al., 2011: 308).

In the studies which aim to find the determinants of the current deficit, researchers concentrate mostly on growth and exchange rate, aside other indicators. In this regard, there are conclusions like growth affects the current deficit because of an increase in demand, or short term capital flows' reflection on exchange rates triggers the current account deficit (Erbaykal, 2007: 87).

The economic growth is roughly stated as the expansion of production frontier. It is also calculated as increase in the real per capita output –net of price changes after a given year. As their main goal along side with development, aspects of the growth varies especially across developing countries. There is a colossal literature in economics about this subject. When some of these studies tries to exert the fundamental ingredients of the growth, others focus on causality relationships amongst other variables such as the current deficit while another strand looks for convergence within groups of countries.

In order to examine the effect of growth on the current deficit, one should first go through the components of the economic growth. For example, if growth is attained with an import dependency, that means it has a reinforcing power on the current deficit. Hepaktan and Çınar (2012) looked for a relationship between growth and current deficit among OECD countries and estimated its long term effect on the current deficit. The data set consists of 1836 observations for 27 OECD members' GDPs and current deficits between 1975-2008.

In another study, Yılmaz and Akıncı (2011) investigated the relationship between growth and current deficit with yearly data for the period of 1980-2010. They used Granger causality and Johansen cointegration tests. As a result the current deficit and growth in Turkey appeared to be cointegrated and there is a one way causality from growth to current deficit.

Different than the mainstream of examining short term effects of current deficit on growth, De Mello et al. (2011) looked for the long term relationships using ordered probit model. They used over 100 countries', including both developed and developing ones, data in the period 1971-2007. They suggested a break in growth series after two periods of a current account deficit. They also conclude that along side with the fragility caused by the macroeconomic structure, current account deficits affect economic growth negatively.

Quarterly relationship between economic growth and current account balance of Turkey between 1991:4-2005:4 estimated by Telatar and Terzi (2009). The study includes Granger causality and VAR analyses. They have found a one way causality relationship from growth to current account balance.

In their study, Kandil and Greene (2002) examined the sensitivity of the current account balance of the USA against the business cycle. The data set consists of yearly figures between 1960-2000 and they use Johansen-Juselius cointegration and Vector Error Correction models (VECM). The conclusion favors a long term and negative causality relationship between the growth rate and the current account balance.

2. DATA SET and METHODOLOGY

The aim of this paper is to determine the causality relationship between growth and current account deficit among G7 countries. The empirical model is based on the five countries' annual data of growth rate and current account balance from 1980 to 2012. The empirical panel data analysis is stated as follows:

$$\boldsymbol{C.A = f(G)}$$

C.A: Current Account Balance (Curr. Acct. Bal./GDP ratio)

G: Growth Rate (GDP increase with constant prices)

Data set is obtained from World Economic Outlook (WEO) database which is provided by International Monetary Fund (IMF). E-views 7.0 and Gauss 10.0 programmes have been used to obtain the panel data analysis results.

Panel data is commonly used when the aim is to compare different countries in economic analyses. The analysis of cross sectional units or additional time varying analyses are possible with this methodology. Thus, both time varying and individualistic differences are possible to pursue (Cameron and Trivedi, 2005:695).

In the panel data analyses individual (cross sectional) observations are considered with different time properties. As a result, many time varying observations can be obtained for each individual data point in the sample (Arellano, 2003:1). The equation for estimators in panel data analysis is below:

$$\mathrm{y_{it} = a_i + \beta_i x_{it} + u_{it}}$$

where *i* indicates the economic decision makers' (cross sections) set (i.e. firm, household, country), *t* denotes time. $\mathrm{a_i}$, is the estimated constant of *i*th cross sectional unit at time *t* which also accounts for the individual effects (Baltagi, 2005:6).

3.EMPIRICAL RESULTS

As a starting point, homogeneity of the variables have been examined via delta test. Homogeneity of the variables has an effect on the directions and structures of following unit root and cointegration tests. Delta test can be conducted in two ways as denoted below (Pesaran and Yamagata, 2008:56):

$$\tilde{\Delta}= \sqrt{N}\frac{N^{-1}\check{S} - k}{\sqrt{2k}}$$

And the equation below gives the adjusted delta test statistic:

$$\tilde{\Delta}_{adj}= \sqrt{N}\frac{N^{-1}\tilde{S} - E(\tilde{Z}_{it})}{\sqrt{Var(\tilde{Z}_{it})}}$$

Null and alternative hyphotheses can also be stated as:

$$y_{it} = a_i + \beta_i x_{it} + u_{it}$$

H_0: $\beta_1 = \beta_2 = \cdots = \beta_n = \beta$ (for all β_i)

H_1: $\beta_1 = \beta_2 = \cdots \neq \beta_n$ (at least for one i)

Table 1: Delta Test Results

Test	Test İstatistiği	Prob.
$\tilde{\Delta}$	2.818	0.002
$\tilde{\Delta}_{adj}$	2.960	0.002

According to the results on Table 1, variables in the model are heterogeneous. The calculated probability of rejecting H_0 is larger than 95%.

It is important to find out the cross sectional independencies for the series which are proven to be heterogeneous with delta test. The independence of the cross sectional data can be stated also as whether all the cross sectional data be affected equally by a shock at any time or not. In this study, *Pesaran CD_{LM}* test is used in order to determine whether the cross sections are independent:

$$\Delta Y_{it} = \alpha_i + b_i\, y_{i,t-1} + \sum_{j=1}^{p_i} c_{ij}\, \Delta Y_{i,t-j} + d_i t + h_i \bar{y}_{t-1} + \sum_{j=0}^{p_i} \eta_{ü}\, \Delta \bar{y}_{i,t-j} + \varepsilon_{i,t}$$

CD_{LM} test statistic is to be obtained by the equation above in order to examine the cross sectional independence. A contemporaneous correlation, low or high, is expected between the residuals. These correlations' statistical significance is tested with Breusch ve Pagan (1980) LM test (Pesaran, 2004:4; Güloğlu and İspir, 2009:4). LM test statistic can be calculated as follows:

$$\mathrm{LM} = \mathrm{T} \sum_{\mathrm{i=j}}^{\mathrm{N-1}} \sum_{\mathrm{j=i+1}}^{\mathrm{N}} \hat{\rho}_{\mathrm{ij}}^2 \sim \chi^2_{\mathrm{N(N-1)/2}}$$

Here ρ_{ij} are the simple correlation coefficients between the residuals of the Least Squares Estimation (LSE). Under the null hyphothesis of there is no correlation between residuals, LM test statistic has a chi-squared (χ^2) distribution while N is constant and T approaches to infinity.

For large values of N and T the test statistic called $\mathrm{CD_{LM}}$ can be used (Pesaran, 2004:5, Güloğlu and İvrendi, 2010:384).

$$\mathrm{CD_{LM}} = \sqrt{\frac{1}{\mathrm{N\,(N\text{-}1)}}} \sum_{\mathrm{i=j}}^{\mathrm{N-1}} \sum_{\mathrm{j=i+1}}^{\mathrm{N}} \left(\mathrm{T}\,\hat{\rho}_{\mathrm{ij}}^2 \text{-} 1\right) \sim \mathrm{N}(0,1)$$

Null and alternative hyphotheses about $\mathrm{CD_{LM}}$ are as follows:

H_0: $\rho_{ij} = \rho_{ji} = \mathrm{cor}\left(u_{it}, u_{jt}\right) = 0$, $i \neq j$ (cross sections are not dependent)

H_1: $\rho_{ij} = \rho_{ji} \neq 0$, $i \neq j$ (cross sections are dependent)

Table 2: Cross sectional independence test for the variable "C.A." ($\mathrm{CD_{LM}}$ Test)

CD Test		Test İstatistiği	Prob
LM	(Breusch,Pagan 1980)	64.043	0.000
$\mathrm{CD_{LM}}$	(Pesaran 2007)	6.642	0.000

According to the results presented in Table 2, the null hyphothesis stating cross sectional independence of variable C.A. in the model is rejected. So there is a dependency between the cross sections composing C.A.

Table 3: Cross sectional independence test for the variable "G" (CD_{LM} Test)

CD Test		Test İstatistiği	Prob
LM	(Breusch, Pagan 1980)	91.669	0.000
CD_{LM}	(Pesaran 2007)	10.905	0.000

According to the results presented in Table 3, the null hyphothesis stating cross sectional independence of variable G in the model is rejected, because the probability is less than 0.05. So there is a dependency between the cross sections composing G.

Estimated heterogeneity and cross sectional independence tests are encouraging for a necessary unit root tests to be run before the panel cointegration test. One of the important challanges of panel unit root tests is whether the cross sections are treated as independent or not. Panel unit root tests called First Generation are formed under the assumption of cross sectional independence.

Tests which are developed by Im, Pesaran and Shin (1997), Maddala and Wu (1999), Levin et al. (2002), Hadri (2000) and Choi (2001) are examples of the First Generation unit root tests (Güloğlu and İspir, 2009:2).

It may not be plausible to assume that cross sections which form the panel are not going to be affected from each other against a one time shock to the series. Unit root tests which are compatible with cross sectional dependencies are needed to be used in order to achieve efficient estimations (Nazlıoğlu, 2010:104).

Unit root tests which are compatible with the cross sectional dependencies are called the Second Generation unit root tests. Most of the tests developed for this purpose depend on modelling the factor structures of the residuals which are belonging to the cross sections. Examples to this kind are Choi 2002, Phillips and Sul 2003, Bai and Ng 2004, Moon and Peron 2004 (Nazlıoğlu, 2010:104; Güloğlu and İvrendi, 2010:382). To provide functionality, Pesaran (2007) developed a panel unit root test which accounts for the cross sectional dependencies, instead of the factor structures of the residuals. This method is called Cross-Sectionally Augmented Dickey-Fuller (CADF) test and based on the estimation of the regression below:

$$\Delta Y_{it} = \alpha_i + b_i\, y_{i,t-1} + \sum_{j=1}^{p_i} c_{ij}\, \Delta Y_{i,t-j} + d_i t + h_i \bar{y}_{t-1} + \sum_{j=0}^{p_i} \eta_{ü}\, \Delta \bar{y}_{i,t-j} + \varepsilon_{i,t}$$

$H_0 \ : \ b_i = 0$ stationarity

$H_1 \ : \ b_i < 0$ non-stationarity (for i=1,2,…,N)

t-values belonging to b_i are to be calculated via CADF test. The critical values have been tabulated by Pesaran (2007). Pesaran also proved in his Monte Carlo simulation that CADF test is valid in both N>T and T>N conditions (Peseran, 2007: 269, Güloğlu and İvrendi, 2010: 383).

T-statistic of CADF test can be calculated as follows (Pesaran, 2007:269):

$$t_i(N,T) = \frac{\Delta \acute{Y}_i \overline{M_w} Y_{i-1}}{\hat{\sigma}(Y_{\iota-1}^{\prime} \overline{M_w} Y_{i-1})^{1/2}}$$

Also another statistic called CIPS is the mean of t statistics for each cross section (Nazlıoğlu, 2010:92; Pesaran,2007:276).

$$\bar{t} = N^{-1} \sum_{i=1}^{N} t_i \, (N,T)$$

Table 4: CADF test results for the variable C.A.

CADF t-statistic values
-1.3188
-1.3202
-0.2374
-1.1150
-2.6449
-1.9588
-2.9136
CIPS = -1.6441

According to the findings presented in Table 4, the variable C.A. is non-stationary. Calculated t-statistic is larger than the corresponding value of -2.34 from Pesaran (2007), so H_0 is rejected.

Table 5: CADF test results for the variable G.

CADF t-statistic values
-1.1623
-1.9803
-0.4374
-2.3101
-2.0058
-2.4703
-2.3371
CIPS = -1.8148

According to the findings presented in Table 5, the variable G. is non-stationary. Calculated t-statistic is larger than the corresponding value of -2.34 from Pesaran (2007), so H_0 is rejected.

When a joint analysis of both Table 4 and Table 5 is conducted, it is seen that both series has unit roots. Both of the variables, G for economic growth and C.A. for current account balance are non-stationary on the level, in another words these series have the property of I(1).

The results obtained from panel unit root tests are cruical for the panel cointegration tests. While setting up the assumptions for the panel cointegration tests, considering stationarity orders of the variables can change the type of the test. Series taken into consideration exibit cross sectional dependency, which suggests using second generation panel cointegration tests that takes it into consideration.

As mentioned before, some cointegration tests, i.e. Pedroni cointegration test, depend on regression residuals. For level values of the variables in the test, estimated long term parameters and short term error correction coefficients estimated with first differences are needed to be equal. This necessity deteriorates the power of tests and even if there is cointegration among the variables, it would be mistakenly rejected (Westerlund, 2007:710; Nazlıoğlu:94).

Westerlund (2007) developed four panel cointegration tests depending on the error correction model in order to make up for the drawbacks of Pedroni tests. Two of them are called group mean statistics, and remaining are called panel statistics. The Westerlund test assumes that the series in the panel are at the same level and first differences I(1) are stationary (Westurlund, 2007:718).

In Westerlund Error Correction Test panel statistics are calculated as a first step with Dynamic OLS model below:

$$\Delta Y_{it} = \delta_i d_t + \lambda_i x_{it-1} + \sum_{j=1}^{\rho_i} a_{ij}\,\Delta Y_{it-1} + \sum_{j=0}^{\rho_i} \lambda_i\,\Delta x_{it-j} + e_t$$

$$Y_{it-1} = \delta_i d_t + \lambda_i x_{it-1} + \sum_{j=1}^{\rho_i} a_{ij}\,\Delta Y_{it-1} + \sum_{j=0}^{\rho_i} \lambda_i\,\Delta x_{it-j} + \varepsilon_t$$

Later, error correction parameters and their standard errors are calculated for all of the panel.

$$a_i = \left[\sum_{i=1}^{N}\sum_{t=2}^{T}\left(\tilde{Y}_{it-1}\right)^2\right]^{-1} \sum_{i=1}^{N}\sum_{t=2}^{T}\frac{1}{a_i(1)}\tilde{Y}_{it-1}\Delta\,\tilde{Y}_{it}$$

$$S.E(a_i) = \left[(\tilde{S}_N)^2\sum_{i=1}^{N}\sum_{t=2}^{T}\tilde{Y}_{it-1}{}^2\right]^{-1/2}$$

And finally, panel cointegration statistics are calculated as follows:

$$P_t = \frac{a}{S.E(a)} \sim N(0,1)$$

$$P_a = T_a \sim N(0,1)$$

Null and alternative hyphotheses on the panel test statistic calculated in previous three steps are stated below:

H_0: $a_i = 0$ no cointegration for all cross section units

H_1: $a_i = a < 0$ there is cointegration for all cross section units.

While Westerlund (2007) panel cointegration test is being compared to the standard normal distribution, the assumption is that there is no cross sectional dependencies. Westerlund (2007) suggests that in order to take cross sectional dependencies into consideration it should be compared with “bootstrap” distribution critical values provided by Chang (2004) (Nazlıoğlu, 2010:96).

Table 6: Westerlund (2007) ECM Test Results

		Test Statistics	Bootsrapt Prob.
g_τ	Group Mean	2.192	0.002
g_a	Group Mean	0.727	0.012
p_τ	Panel	3.554	0.023
p_a	Panel	1.944	0.042

According to the results presented in Table 6, null hyphothesis which suggests cross sectional cointegration is rejected in the panel. Bootrsrap values was taken into consideration because of the cross sectional dependencies when the numerical values were being interpreted. This proves the cointegration amongst all cross sections within the panel.

The results of the panel cointegration tests determine which estimation technique shall be used for the panel causality analysis. There are 4 commonly used panel causality tests in the literature:

1- Panel VECM (2008)
2- Coining and Pedroni (2008)
3- Emirmahmutoğlu and Köse (2011)
4- Dumitrescu and Hurlin (2012)

The presence of cointegration relationship within the cross sections changes the causality test to be used. All the panel causality tests have the assumption of cross sectional independencies. Only Dumitrescu and Hurlin (2012) test can be used to estimate for both dependent and independent cross sections and yet can provide efficient output (Dumitrescu and Hurlin, 2012:1).

Dumitrescu and Hurlin(2012) test has similarities to Granger causality test. The test refers to the mean of Wald tests calculated for Granger causality test (Dumitrescu and Hurlin, 2012:1). Both heterogeneity and cross sectional dependencies are taken into consideration. Another improvement of the Dumitrescu and Hurlin test is that it works for both of the cases where there is cointegration or not.

There are 3 different test statistics calculted in Dumitrescu and Hurlin (2012) panel causality test (Dumitrescu and Hurlin, 2012:4-5):

$$W_{N,T}^{Hnc} = \frac{1}{N}\sum_{i=1}^{N} W_{i,T}$$

$$Z_{N,T}^{Hnc} = \sqrt{\frac{N}{2K}}\left(W_{N,T}^{Hnc} - K\right) \xrightarrow[N,T\to\infty]{d} N(0,1)$$

$$Z_{N}^{Hnc} = \frac{\sqrt{N}\left[W_{N,T}^{Hnc} - N^{-1}\sum_{i=1}^{N} E\,(W_{i,T})\right]}{\sqrt{N^{-1}\sum_{i=1}^{N} Var(W_{i,T})}} \xrightarrow[N,T\to\infty]{d} N(0,1)$$

Null and alternative hyphotheses for calculated panel statistics are as follows (Dumitrescu and Hurlin, 2012:4):

$H_0: \beta_i = 0\ \forall_i = 1,2,\dots,N$

$H_i: \beta_i = 0\ \forall_i = 1,2,\dots,N_1$

$\beta_i \neq 0\ \forall_i = N_1+1, N_1+2,\dots,N$

When the null is rejected, it shows causality relationship between the variables.

Table 7: Dumitrescu and Hurlin (2012) Test Results

Null Hyphothesis	Test	Statistic	Prob.
C.A does not Granger cause G	W_{hnc}	2.4645	0.0191
	Z_{hnc}	2.7398	0.0093
	Z_{tild}	2.2884	0.0290
G does not Granger cause C.A	W_{hnc}	1.2232	0.1887
	Z_{hnc}	0.4177	0.3656
	Z_{tild}	0.2455	0.3870

When the results in Table 7 examined, it is clearly seen that the causality direction in the empirical model is from the variable C.A. to the variable G.

In the light of the empirical results, it is possible to make te statement that there is a causality relationship from current account balance towards economic growth amongts the major development countries.

CONCLUSIONS

Today, current account deficit is upon many countries as a product of the financial globalization. From the late 90s to the lastest global financial crisis, many countries exhibit increasing current account deficits. These deficits are increasing the fragility of the national economies at the same time they are contributing to the economic growth. When major development countries are the case, it is seen that the current account deficits have been financed by speculative and debt-increasing resuorces.

The current account deficit allows a country to consume more than it produces and/or invest more than it saves. Economic growth can be achieved or increased through foreign capital transfers. The concept of the current deficit can be harmless and useful especially when the financing of the deficit is smoothly sustainable.

The results of this study exhibit the cointegration between current deficit and growth. In other words, current account deficit and the economic growth tend to move together in the long run. With this fact, causality tests have been conducted and they have shown that there is a causality relation from the current account deficit towards the economic growth. In this context, it becomes important for the major development "G7" countries that how the deficit is being financed. The favorable effects of the current account deficit depends also on the sustainability of it, and it is well known that the short term capital flows are not considered much of sustainable.

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