Is the Inadequacy of National Savings the Reason of Current Account Deficit? Empirical Analysis in Fragile Eight[*]

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Abstract: Current account deficits, which reflect insufficient savings, are important indicators in the crisis analysis and an important problem that increases fragility. This study aims to discuss whether the inadequacy of national savings is the reason for the current account deficit. For this purpose, the countries called Fragile Eight due to current deficits and financing problems are addressed, and the causality relations between the fact of saving and current account deficit, and whether they are co-integrated or not are analyzed. Cointegration tests, the Bounds test and Granger causality test are used through the Vector Autoregressive (VAR) Model and the Error Correction (VECM) Model according to the characteristics of the series of countries. Savings, current account deficits and external debt data for the period of 1980-2015 are considered as variables. This study is important in terms of proving the importance of savings empirically and contributing to the Triple Deficit Hypothesis.

Keywords: Current Account Deficit, Savings, Fragile Eight, Twin Deficit, Triple Deficit

JEL Classification Number: C10, E20, F20, F30

1. Introduction

Many financial crisis experiences have shown that current account deficit/gross domestic product ratio should be monitored as a guiding signal. At the very least, it is necessary to bear in mind that this ratio could prepare the ground for an uneasy atmosphere. In fact, big deficits should be a cause of concern.(Edwards, 2001:66). Current account deficits are also very important problems because they increase fragility to the external shocks. The current account deficit is an indicator of the entire saving and investment decisions, and reflects the difference between the savings and investments of a country's economy and stems

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from the imbalance between private savings and private investments (Milesi-Ferreti, Razin, 1996(a): 40).

Situation of the developing countries that are in need of external sources to finance their development due to insufficient national savings and of which vulnerability increases because of funding their current deficits with hot money to save the day due to their failure in attracting direct investments in the current deficit financing, is a serious risk factor for the global economy. For developing countries meeting on this common ground, a classification was first made by Morgan Stanley in 2013 and the definition of **Fragile Five** *(Brazil, India, Indonesia, South Africa and Turkey)* was used. Later on, the **Fragile Eight** with the inclusion of *Hungary, Poland and Chile* and the **New Fragile Five** in 2015 *(Argentina, Colombia, Peru, Turkey, Venezuela)* were created.

The purpose of the study that has been put together based on this current problem, which is important in term of the global economy, is to discuss whether insufficient national savings are the reason of current account deficits in the developing countries or not. The determination of the main cause of the current account deficit problem sheds light on the choice of policies to be followed in resolving the problem. The study consists of four parts. The first, second, third and fourth parts contain the introduction, literature, empirical analyzes and results of the study, respectively.

2. Literature Review

Indirect-direct studies for saving-current account deficit correlations are given in Table 1.

Table 1:Literature Review

Study	Year	Findings
Sachs	1981	The CAD gets worse with the booms that may ocur in the investment.
Zaidi	1985	The increase in investment expenditures puts pressure on savings and increase the BD. The resulting BD affects external deficits adversely.
Dooley et al.	1987	The increase in savings rates reduces the CAD.
Roubini	1988	Savings deficits increase the BD which negatively affects external deficits.
Hatsopoulos et al.	1988	The reasons for the increasing external deficit in the American economy are low savings and the BD resulting from low savings.
Baxterand Crucini	1993	Savings and investment correlations are found to be high in almost all countries.
Hakkio	1995	The low private sector savings and large public budget deficits in the US are important factors behind large CAD.

Table 1 continued

Milesi-Ferretti and Razin	1996	They have obtained a result that low savings cause the CAD.
Higgins and Klitgaard	1998	Draws attention to the success of the Federal Government in raising national savings by eliminating the BD.
Cooper	2001	For the United States, where consumption high, it is indicated that the high CAD would lead to a series of financial problems and net capitalin flows cause the CAD.
Mann	2002	In the American economy, the saving deficit triggers the BD and causes negative impacts on the foreign trade balance.
Ventura	2002	It is found that there is a positive relation between savings and investments.
Labonte	2005	In the American economy, the saving deficit triggers the BD and causes negative impacts on the foreign trade balance.
Hubbard	2006	In the American economy, the saving deficit triggers the BD and causes negative impacts on the foreign trade balance.
Chowdhury and Saleh	2007	In Sri Lanka, they revealed presence of a strong and positive relation between the CAD , the savings-investment balance and the BD.
Şengönül	2008	Determined that the triple deficit hypothesis is valid and identified the cointegration relation.
Sürekçi	2011	Determined a correlation between the public deficit and current deficit. However, the existence of a meaningful Granger causality relationship betweens aving-investment ratio and CAD has not been found.
Elwell	2013	In the American economy, the saving deficit triggers the BD and causes negative impacts on the foreign trade balance.
Akıncı and Yılmaz	2013	Saving deficits and BD have a positive effect on the CAD both in short and long term. Saving and BD are determined to be the most important factors affecting the CAD.
Tülümce	2013	It is concluded that the triple deficit hypothesis is not valid in Turkey. Saving-investment deficit is the cause of the CAD.
Türkay	2013	Determined that there is a long-term relation between the saving-investment deficit, CAD and BD.
Şen et al.	2014	Existence of the triple deficit hypothesis in Turkey during 1980-2010 is determined.

CAD and BD refer to the current account deficit and budget deficit, respectively. Some of the studies in Table 1 (even if indirectly) reveal results that help explaining the triple deficit hypothesis containing a small number of empirical studies.

3. Empirical Analysis
3.1. Methods

First, the unit root research is carried out. Stability is examined by using the Augmented Dickey-Fuller (ADF) unit root test developed by Dickey and Fuller (1979) and Phillips-Perron (PP) tests developed by Phillips and Perron (1988). Augmented Dickey-Fuller (ADF) unit root tests are taken as the level and first difference. Schwarz information criterion is used to determine appropriate delays. In the series, where cointegration is applied, compliance with the MacKinnon criteria is also examined. Different methods have been used to determine the causality relations between the variables according to the characteristics of the series. Cointegration Tests, the Bounds Test and Granger Causality Test through the Vector Autoregressive (VAR) Model and the Error Correction (VECM) Model is applied according to the characteristics of the series. In order for cointegration to be applied, the series must demonstrate the same characteristics; Engle-Granger and Johansen tests could be applied to only *Brazil, Indonesia, Hungary, Poland and Turkey*. According to the findings, short-term relationships are tested by applying Granger Causality Test through VECM model or VAR Model. The Granger Causality Test is applied to *Chile, India and South Africa*, of which series showed different characteristics, through the VAR Model. In addition, the long-term relationship between the series has also been analyzed with the Bounds Test, which allows application of cointegration to the series with different degrees of cointegration.

3.2. Data and Empirical Results

It is a common opinion that low saving ratios lead to current account deficits. For this purpose, Iuse annual time series data on savings, current account deficit, external debt for the period of 1980-2015 for *Brasil, South Africa, Indonesia, India, Hungary, Poland, Chile and Turkey* were obtained from IMF. The econometric model is formed as follows;

$$CAD_t = \alpha_0 + \alpha_1 S_t + \alpha_2 ED_t + \varepsilon_t \qquad (1)$$

where CAD, S and ED refer to the current account deficit, savings and foreign debt, respectively. In the econometric model, the causality relationship between savings, external debt and current account deficit and whether they are co-integrated or not is analyzed. In the regression analysis, the current account deficit is considered as dependent variable. Savings and foreign debts are considered as independent variables.

In the first step of the analysis, the unit root properties of the data are investigated by using Augmented Dickey Fuller (ADF) and Philips and Perron (PP) unit root tests. Table 2 reports the unit root results.

Table 2: Results of Unit Root Tests

		Variables	Test Statistic	Critical Values		
				1%	5%	10%
Brasil	**ADF**	CAD, *level*	-1.360721	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-4.283235***	-3.639407	-2.951125	-2.614300
		S, *level*	-1.702669	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-5.255102***	-3.646342	-2.954021	-2.615817
		ED, *level*	-2.221826	-4.262735	-3.552973	-3.209642
		ED, *1st difference*	-5.304908***	-3.653730	-2.957110	-2.617434
	PP	CAD/GDP, *level*	-1.661293	-4.243644	-3.544284	-3.204699
		CAD/GDP, *1st difference*	-4.354285***	-3.639407	-2.951125	-2.614300
		S/GDP, *level*	-1.729446	-4.252879	-3.548490	-3.207094
		S/GDP, *1st difference*	-5.234109***	-3.646342	-2.954021	-2.615817
		ED/GDP, *level*	-2.240906	-4.262735	-3.552973	-3.209642
		ED/GDP, *1st difference*	-5.338326***	-3.653730	-2.957110	-2.617434
Chile	**ADF**	CAD, *level*	-3.436459*	-4.243644	-3.544284	-3.204699
		S, *level*	-2.643776	-4.262735	-3.552973	-3.209642
		S, *1st difference*	-4.241300***	-3.653730	-2.957110	-2.617434
	PP	CAD, *level*	-3.436459*	-4.243644	-3.544284	-3.204699
		S, *level*	-2.008796	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-3.074652**	-3.646342	-2.954021	-2.615817
Hungary	**ADF**	CAD, *level*	-0.837518	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.377498***	-3.639407	-2.951125	-2.614300
		S, *level*	-2.523940	-4.532598	-3.673616	-3.277364
		S, *1st difference*	-4.836671***	-3.788030	-3.012363	-2.646119
	PP	CAD, *level*	-0.837518	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.377498***	-3.639407	-2.951125	-2.614300
		S, *level*	-2.405767	-4.440739	-3.632896	-3.254671
		S, *1st difference*	-4.928208***	-3.788030	-3.012363	-2.646119
India	**ADF**	CAD, *level*	-2.160589	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.160493***	-3.639407	-2.951125	-2.614300
		S, *level*	-0.850834	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-4.937030***	-3.646342	-2.954021	-2.615817
		ED, *level*	-4.242517**	-4.262735	-3.552973	-3.209642
		ED, *1st difference*	--	--	--	--
	PP	CAD, *level*	-2.310057	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.121043***	-3.639407	-2.951125	-2.614300
		S, *level*	-0.699650	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-4.888589***	-3.646342	-2.954021	-2.615817
		ED, *level*	-4.142651**	-4.262735	-3.552973	-3.209642
		ED, *1st difference*	--	--	--	--
Indonesia	**ADF**	CAD, *level*	-0.974200	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.175430***	-3.639407	-2.951125	-2.614300
		S, *level*	-1.596411	-4.262735	-3.552973	-3.209642
		S, *1st difference*	-3.232190**	-3.646342	-2.954021	-2.615817
		ED, *level*	-1.300526	-4.262735	-3.552973	-3.209642
		ED, *1st difference*	-5.330339***	-3.653730	-2.957110	-2.617434

Table 2 continued

Indonesia	**PP**	CAD, *level*	-1.161137	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.143469***	-3.639407	-2.951125	-2.614300
		S, *level*	-0.908250	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-3.198946**	-3.646342	-2.954021	-2.615817
		ED, *level*	-1.356468	-4.262735	-3.552973	-3.209642
		ED, *1st difference*	-5.329530***	-3.653730	-2.957110	-2.617434
Poland	**ADF**	CAD, *level*	-2.640727	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-6.241257***	-3.639407	-2.951125	-2.614300
		S, *level*	-2.000085	-4.416345	-3.622033	-3.248592
		S, *1st difference*	-2.841821	-3.831511	-3.029970	-2.655194
	PP	CAD, *level*	-2.640727	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-6.328201***	-3.639407	-2.951125	-2.614300
		S, *level*	-2.015966	-4.416345	-3.622033	-3.248592
		S, *1st difference*	-4.224109***	-3.769597	-3.004861	-2.642242
South Africa	**ADF**	CAD, *level*	-3.969801**	-4.252879	-3.548490	-3.207094
		S, *level*	-2.187529	-4.262735	-3.552973	-3.209642
		S, *1st difference*	-4.074231***	-3.646342	-2.954021	-2.615817
		ED, *level*	-3.442660*	-4.532598	-3.673616	-3.277364
		ED, *1st difference*	--	--	--	--
	PP	CAD, *level*	-1.983944	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.298158***	-3.639407	-2.951125	-2.614300
		S, *level*	-1.909010	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-3.970727***	-3.646342	-2.954021	-2.615817
		ED, *level*	-3.438411*	-4.532598	-3.673616	-3.277364
		ED, *1st difference*	--	--	--	--
Turkey	**ADF**	CAD, *level*	-2.970613	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-5.819912***	-3.646342	-2.954021	-2.615817
		S, *level*	-2.737730	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-7.513773***	-3.646342	-2.954021	-2.615817
		ED, *level*	-1.346748	-4.262735	-3.552973	-3.209642
		ED, *1st difference*	-4.234839***	-3.653730	-2.957110	-2.617434
	PP	CAD, *level*	-2.930990	-4.243644	-3.544284	-3.204699
		CAD, *1st difference*	-7.382663***	-3.639407	-2.951125	-2.614300
		S, *level*	-2.631449	-4.252879	-3.548490	-3.207094
		S, *1st difference*	-7.766046***	-3.646342	-2.954021	-2.615817
		ED, *level*	-1.407132	-4.262735	-3.552973	-3.209642
		ED, *1st difference*	-4.242251***	-3.653730	-2.957110	-2.617434

Note: *** represents a significance level of 1%. The number of delays in the ADF tests is determined according to the Schwarz criteria. In the PP tests, the number of delays determined according to Newey-West Bandwith is taken. As a test format, fixed and trend equation options are used for all variables at level value. The fixed equation option is used to obtain the first differences.

As can be seen from Table 2, the series have different characteristics.

3.2.1. Brasil, Hungary, Indonesia, Poland, Turkey

To determine existence of a long-term relation in *Brazil, Hungary, Indonesia, Poland and Turkey*, the Engle-Granger, Johansen and Granger Causality Test is applied. As it can be seen from Table.3, which shows the results of the Engle-Granger test, the series in *Brazil, Indonesia, Hungary, Poland and Turkey* are not cointegrated.

Table 3: Engle-Granger Test

Country	ADF-Statistic	MacKinnon Critical Values	
Brasil	-1.000073	1%	-4.2981
Hungary	-2.831506	5%	-3.7429
Indonesia	-1.538925	10%	-3.4518
Poland	-2.363716		
Turkey	-3.0577182		

Because the Engle-Granger test did not yield healthy results as the number of variables increased, the Johansen test is also applied to these countries so that the long-run relationship between variables could be determined accurately (Table 4). According to test results,

- ▪ The variables are not cointegrated in *Brazil, Hungary and Poland*. The results are consistent with the results of the Engle-Granger test.
- ▪ On the other hand, the variables are cointegrated in *Indonesia and Turkey*. By obtaining a result different from the Engle-Granger test, a long-term relation between the series has been found.

Table 4: Results of Johansen Test

Countries	λ Trace Statistic				λ Max-Eigen Statistic			
	Eigenvalue	λ trace	0.05 C. V.	Prob.	Eigenvalue	λ max	0.05 C. V.	Prob.
Brasil	0.426824	29.66011	35.19275	0.1748	0.426824	17.81002	22.29962	0.1886
	0.227188	11.85009	20.26184	0.4623	0.227188	8.247038	15.89210	0.5185
	0.106488	3.603048	9.164546	0.4744	0.106488	3.603048	9.164546	0.4744
Hungary	0.645178	34.89704	35.19275	0.0538	0.645178	20.72279	22.29962	0.0817
	0.396188	14.17425	20.26184	0.2776	0.396188	10.08986	15.89210	0.3262
	0.184717	4.084396	9.164546	0.3997	0.184717	4.084396	9.164546	0.3997
Indonesia	0.642794	62.89498	42.91525	0.0002	0.642794	32.94219	25.82321	0.0049
	0.518738	29.95279	25.87211	0.0147	0.518738	23.40297	19.38704	0.0123
	0.185094	6.549821	12.51798	0.3938	0.185094	6.549821	12.51798	0.3938
Poland	0.358789	15.40381	20.26184	0.2041	0.358789	9.776743	15.89210	0.3551
	0.225684	5.627068	9.164546	0.2216	0.225684	5.627068	9.164546	0.2216
Turkey	0.545234	33.17187	24.27596	0.0029	0.545234	25.21508	17.79730	0.0032
	0.217849	7.956781	12.32090	0.2400	0.217849	7.862630	11.22480	0.1834
	0.002938	0.094151	4.129906	0.8009	0.002938	0.094151	4.129906	0.8009

Note: C.V. stands for critical value.

To test whether the variables in *Indonesia and Turkey* are related to each other in the short term, the Granger causality test is applied through the Error Correction Model (VECM) (Table 5, Figure 1). To determine whether the variables are related to each other in the short-term in *Brazil, Hungary and Poland*, the Granger causality test is applied through the VAR Model (Table 6, Figure 1).

Table 5: Results of the Granger Causility Test over VECM

	Hypothesis	F-Value	Direction of Causility
Indonesia	S does not (Granger) causes CAD	7.250654**	**S→CAD**
	ED does not (Granger) causes CAD	5.542158*	**ED→CAD**
	CAD does not (Granger) causes S	0.331653	
	ED does not (Granger) causes S	2.776695	
	CAD does not (Granger) causes ED	8.313431**	**CAD→ED**
	S does not (Granger) causes ED	0.461609	
Turkey	S does not (Granger) causes CAD	3.068203	
	ED does not (Granger) causes CAD	10.04803***	**ED→CAD**
	CAD does not (Granger) causes S	3.902597	
	ED does not (Granger) causes S	5.740852*	**ED→S**
	CAD does not (Granger) causes ED	8.222630**	**CAD→ED**
	S does not (Granger) causes ED	8.110958**	**S→ED**

In *Brazil and Indonesia*, savings are seen to be the Granger cause of the CAD.

3.2.2. Chile, India, South Africa

The Granger Causality Test has been applied through VAR in *Chile, India, South Africa*, where cointegration cannot be applied because the series show different characteristics (Table 6). The findings of the analysis are shown in Figure 1.

Table 6: Results of the Granger Causility Test over VAR

	HoHypothesis	F-Value	Direction of Causility
Chile	S does not (Granger) causes CAD	4.493092	
	CAD does not (Granger) causes S	13.86683***	**CAD→S**
Hungary	S does not (Granger) causes CAD	0.520283	
	ED does not (Granger) causes CAD	6.989117	**ED→CAD**
	CAD does not (Granger) causes S	6.155505	
	ED does not (Granger) causes S	23.77417***	**ED→S**
	CAD does not (Granger) causes ED	3.238544	
	S does not (Granger) causes ED	1.735853	
India	S does not (Granger) causes CAD	17.09159***	**S→CAD**
	ED does not (Granger) causes CAD	5.369612	
	CAD does not (Granger) causes S	43.75955***	**CAD→S**
	ED does not (Granger) causes S	35.43067***	**ED→S**
	CAD does not (Granger) causes ED	3.993237	
	S does not (Granger) causes ED	8.540380**	**S→ED**

Table 6 continued

Poland	S does not (Granger) causes CAD	2.831157	
	CAD does not (Granger) causes S	5.524351	**CAD→S**
South Africa	S does not (Granger) causes CAD	18.27943***	**S→CAD**
	ED does not (Granger) causes CAD	6.385955*	**ED→CAD**
	CAD does not (Granger) causes S	6.928894*	**CAD→S**
	ED does not (Granger) causes S	2.431389	
	CAD does not (Granger) causes ED	29.71518***	**CAD→ED**
	S does not (Granger) causes ED	80.97647***	**S→ED**

Note**:** ***, ** and * refer 1, 5 and 10 percent level of significance.

The cointegration relation between the series in *Chile, India and South Africa,* where Engle-Granger and Johansen cointegration tests cannot be applied, is investigated by using the Bounds Test approach (Table 7). According to the Akaike and Schwarz criteria, the appropriate number of delays has been identified as one in *Chile and South Africa*, two in *India* and no autocorrelation has been found in this delay lag.

Table 7: Results of Bounds Test

Country	Lag	AIC	SC	LM (1)	Prob.	LM (3)	Prob.	F Stat.	Result
	1	18,908	19,018	0,044	0,8355	0,532	0,6646	4,691	Long run
Chile	2	19,064	19,431	5,527	0,0277	3,582	0,0310		relationship
	3	**18,984**	**19,446**	**16,462**	**0,0006**	**5,628**	**0,0067**		
	1	20,766	21,178	1,454	0,2407	0,470	0,7059		Long run
India	2	20,152	20,708	1,977	0,1767	1,989	0,1561	6,264	relationship
	3	**20,213**	**20,914**	**4,272**	**0,0578**	**2,494**	**0,1096**		
South	1	18,630	19,075	0,875	0,3767	0,817	0,5298	6,759	Long run
Africa	2	18,633	19,221	0,213	0,6681	4,586	0,1847		relationship
	3*	**18,783**	**19,507**	**0,1414**	**0,707**	**3,8065**	**0,283**		

Note: AIC and SC are Akaike and Schwarz information criterions. %5 Critical Value:3,23-4,35 (k=2). * Correlogram is looked into with the Q Statistics. ** denotes 5% Critical Value: 3,79-4,85 (k=3).

F statistics values [respectively (6,759),(6,264), and (4,691)] that are obtained by establishing hypothesis as C(7)=C(8)=C(9)=0 in *South Africa*, C(10)=C(11)=C(12)=0 in *India* and C(5)=C(6)=0 in *Chile* are compared to the critical values established as lower and upper limits by Pesaran et. al. (2001) (I0=3,23-I1=4,35). In result of the analysis made for the three countries, the existence of cointegration relation was determined because the F statistic value is greater than the upper critical value.

Figure 1: Empirical Results
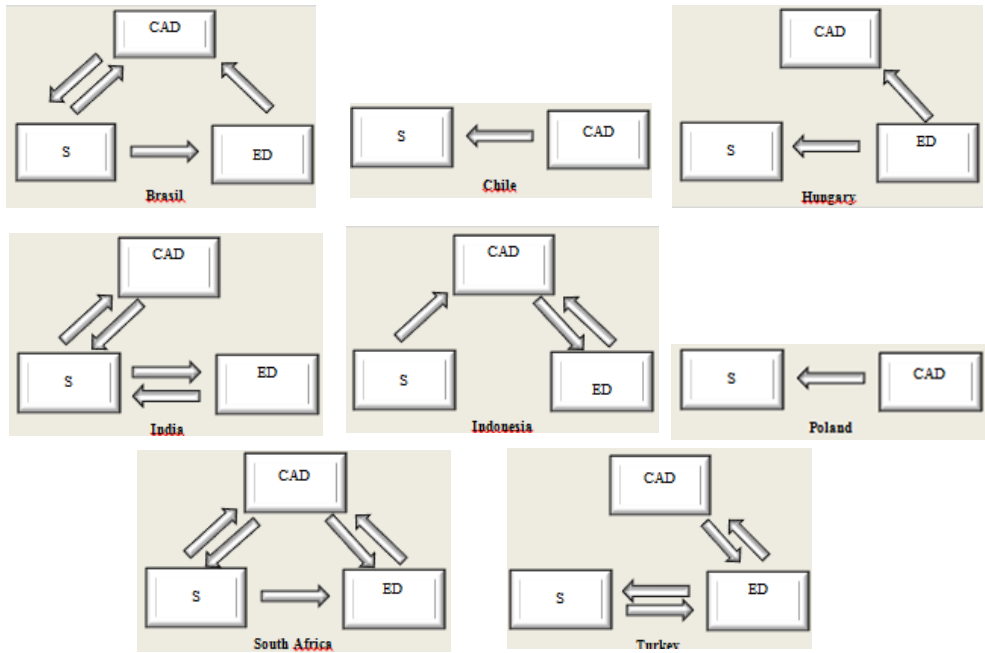
It has been observed that different results are obtained in the analysis of short-term relationships. The results of analyzes, where the short- and long-term causality relationships between savings and current account deficit are tested, can be grouped as follows:

➢ **In the long run**, In the Fragile Eight *(excluding Brazil, Hungary and Poland)*, it is determined that savings and current account deficits are cointegrated. That is to say, existence of long-term relationships between the series has been found.

➢ **In the short run**, results are given in Table 8.

In result of the analyses, different causality aspects are determined among the variables in the short term.

Table 8: Short Terms Findings

Country	Findings	Direction of Causility
Indonesia	Suppose in a Granger causality test I find that savings causes CAD without being caused by the latter (i.e., no bileteral causality).	**S→CAD**
Brasil, India and South Africa	Suppose I find that an savings causes CAD and CAD causes savings (i.e., bileteral causality).	**S↔CAD**
Chile and Poland	Suppose in tests I find that CAD causes savings without being caused by the latter(i.e., no bileteral causality).	**CAD→S**
Hungary and Turkey	Independence is suggested when the sets of savings and CAD coefficients are not statistically significant in both the regressions. I could not find any causality relationships between savings and CAD.	
	Suppose I find that savings causes external debt and external debt causes savings in Turkey(i.e., bileteral causality).	**S↔ED**
	Suppose I find that EDcauses CAD and CAD causes ED in Turkey (i.e., bileteral causality).	**CAD↔ED**
	Suppose in tests I find that ED causes savings without being caused by the latter in Hungary (i.e., no bileteral causality).	**ED→S**
	Suppose in tests I find that Ed causes CAD without being caused by the latter in Hungary (i.e., no bileteral causality).	**ED→CAD**

4. Conclusions

In Fragile Eight *(excluding Brazil, Hungary and Poland)*, the series are found to be cointegrated in the long run. The hypothesis that savings is a Granger cause of current account deficits has been confirmed. Low national saving rate leads to budget deficits. Budget deficits cause current account deficits. Importance of savings in the Twin and Triple Deficit Hypotheses is obvious. Because the FED increases the interest rates and foreign savings favor risk-free zones, possibility of the decrease in borrowing opportunities and increase in borrowing costs, the vulnerability of developing countries increase. Therefore, countries should strive to increase their savings. In line with the obtained results, it is important that developing countries, which are struggling with the current account deficit and vulnerable to external shocks, should develop policies that increase their savings.

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