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Macroeconomic Determinants of Current Account in South-Asian Countries

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This paper empirically investigates the impact of Net Foreign Assets-NFA, Trade Openness-OPEN, Nominal Exchange Rate-NER, and Domestic Relative Income-DRI on selected South-Asian countries for the time period of thirty-two years from 1984-2015. Co-integration technique is used to identify the long-run effect of macroeconomic variables on current account balances. Johansen and Juselius (1990) Co-integration technique has been used to identify the existence of a long-run relationship between current account and expected explanatory variables within the VAR model. Whereas, for the identification of the short-run effect of the explanatory variables on the current account, the Vector Error Correction Model (VECM) has been employed. The results indicate that NFA, OPEN, and DRI are important factors in explaining the long-run behavior of the current account than the NER. The results also prove that NFA, OPEN, and DRI are more pertinent than the NER, in explaining movements in the current account on a long term basis in the context of the sampled countries. The study implies that the current account balance is one of the economic indicators that strengthens the relationship between the macro-economic variables and the current account respectively.

Keywords: Current account, macroeconomic determinants, saving-investment balance, and Co-integration

INTRODUCTION

The current account, together with capital account, make-up the all-important balance of payments, that in turn is one area where economists, policymakers, and stakeholders keep a close watch. Popularly known as the difference between exports and imports, it is regarded as a significant indicator of macroeconomic performance of any economy. It is said to reflect the entirety of transactions executed by domestic residents with foreigners in terms of current goods and services.

Explaining movement in the current account, determining its sustainable level, and identifying policy decisions impacting a change in the current account, has over time gathered importance with policymakers. The behavior of the current account conveys valuable information about the actions and expectations of all market participants. It is, therefore, that several theoretical models have evolved explaining the behavior of a current account, elaborating its determinants, and establishing a relationship between current account balance and its determinants.

Still, there is much room left for empirical analysis to put to test differing theories-more specifically in the context of South Asian countries. Most of the studies conducted until now are either based on developed countries or comparison between developed and developing countries (Gourinchas & Jeanne 2013, Caballero et al. 2008, Chinn & Ito 2007, Bussière et al. 2004). Considering the background, it is felt to observe a study, which focuses specifically on South-Asia and identify the variables that can influence the current account balances of the countries of this region.

Analysis of a number of recent research studies conducted on different economies points towards the existence of a relationship between current account and variables like degree-of-openness to international trade, net foreign assets, exchange-rate, domestic relative-income, and others. This paper is designed to test the same hypotheses within the context of major South-Asian countries including India, Pakistan, Bangladesh, and Sri Lanka using the panel data for the period from 1984 to 2015.

Based on the non-stationary nature of available data, the Cointegrated VAR approach is considered appropriate to analyze the determinants of the current account balance. Johansen and Juselius (1990) Cointegration technique has been used to identify the existence of a long-run relationship between current account and expected explanatory variables; within the VAR model. For identification of the short-run effect of explanatory variables on the current account, the Vector Error Correction Model (VECM) has been put to use.

Significance of the South Asian region (known as SAARC) can be judged by the fact that it constitutes a hefty 23% of the world's population and 15% of the world's arable land. The case for this study is further substantiated by the fact that this same region has excelled itself from the position of the slowest growing region in the 1960s to fastest growing regions since after 1980s. World Bank database shows sub-par GDP growth of the region at 4.2% when compared to 5.4% at the global level in the 1960s. The situation however changed and the region has been sustaining a high average of growth rates, particularly during 2000-08 i.e. 6.3%.

Further analysis shows that these countries have similar export baskets and are competing in similar markets for similar products. These export baskets are relatively more diverse in India, Pakistan and then in Bangladesh and Sri Lanka. The South Asian region itself is extremely diverse with countries having a large population and size as India and Pakistan at one end and island like the Maldives at the other end. For keeping this study relevant and meaningful – the scope has been kept limited to four major countries i.e. India, Pakistan, Bangladesh, and Siri Lanka.

This paper is further divided into four chapters. Chapter two contains a literature review. Data and methodology are elaborated in chapter three and chapter four is comprised of data analysis and interpretation of empirical results. Chapter five explains the conclusion, limitations of the research, and recommendations for future research.

LITERATURE REVIEW

The extensive empirical literature is available, exploring factors that influence current account in developed economies. However, similar studies for developing economies are far and few. The situation with SAARC region economies is even grimmer where no serious study has been sanctioned so far.

The topic of current account draws the interest of scholars since the early 1980s. Most of the studies are being conducted in the case of developed countries that are how different macroeconomic and structural variables can influence the behavior of the current account. Most of the studies are observing the short term fluctuations in current account assuming that current account can be used as a safeguard against the temporary shocks to income which helps to smooth-out consumption, and ultimately maximize economic welfare Ghosh & Ostry (1995), Ghosh (1995), Glick & Rogoff (1995), Kraay & Ventura (2000) and Nason & Rogers (2006). However, from empirical perspective another group has focused on medium and long-term variables that can determine the current account of developed countries Dabelle & Faruqee (1996), Calderon et al. (2002, 2007), Chinn & Prasad (2003) and Chinn & Ito (2007) which later extended to developing countries as well.

One of the recent studies by Das (2016) used a larger data set of twenty-seven industrial countries, thirty-two emerging, and forty-seven developing countries respectively for the time period of 1980-to-2011 and identified the effect of net foreign assets, exchange rates, trade openness, real GDP growth rate and commodity prices on current account. The results indicate that for the developing countries real GDP growth rate, net foreign assets, trade openness, and exchange rate show the negative effect on the current account. However, in the case of developed countries real GDP growth rate, net foreign assets, trade openness, and exchange rate are positively associated with a current account. The findings suggest that the determinants of current account vary according to the characteristics of a country group.

Yet another comparative study by Oshota & Adeleke (2015) used the intertemporal approach to observe the variables that influence the current account balances in Nigeria, Ghana, and Cote d Ivoire. The VAR analysis has been used which indicate a long-run relation between current account balances and its determinants.

However, Sadiku et.al (2015) used the most recent econometric technique and tried to affirm the empirical relation between macroeconomic variables and current account, using a quarterly sample data from 1998-2013 for FYROM. The results indicate that there exists a long-run relationship between current account, fiscal balance, trade openness, terms of trade and financial development. However, fiscal balance, terms of trade and financial development are positively associated with the current account balance whereas, trade openness is negatively related to the current account balances of FYROM.

Camarero et al. (2010) and Gosse and Serranito (2014) identified the factors that influence current account of OECD countries indicating that the pace of convergence of current account to long-run is much quicker in deficit counties as compared to surplus countries. Similarly, in an effort to identify the determinants of the current account in OECD countries a more recent study been conducted by Kim (2012) using the data for the time period of 1981-to-2006. The study indicates that for a country of smaller size - positive government consumption shocks actually severely deteriorate current account. More persistent government consumption shocks and depreciation of the real exchange rate more in a country with a more flexible exchange rate regime. Positive government consumption shocks tend to depreciate real exchange rate more in a country with more trade openness, higher capital mobility and smaller size. A positive government consumption shocks tend to worsen the current account more in a country with higher capital mobility, less trade openness, and less exchange rate flexibility.

The recent studies have investigated the current account determinants considering the specific characteristics of developing countries. Yang (2010) takes up the case of eight emerging Asian economies, analyzing data from 1980-to-2009 individually. The study finds that behavior of a current account, for selected Asian economies, is heterogeneous, indicating structural differences towards business-cycle heterogeneity in selected economies.

Furthermore, net foreign assets and trade openness are main variables that can influence the long-run current account behavior but the exchange rate does not have a strong effect in most of the ample economies. Besides this, Medina et al. (2010) using a sample data of thirty-three emerging economies classify that the fiscal balance has a strong effect on current account for the emerging countries, at the same time the results indicate that a rise in net foreign assets improves the current account. Considering the emerging Asian countries Sek and Chuah (2011) tries to identify that can a change in the exchange rate can affect the current account dynamics. The study makes a comparison between pre and the post-financial crisis of 1997 by using only three variables that are a current account, exchange rate, and CPI. The results indicate that the financial crisis does not affect the current account much as expected as the selected economies have altered their financial policy to minimize the

effect of the exchange rate. Rather than only identifying the determinants of current account

Ang and Sek (2011) compared the determinants of the current account by dividing the sample countries into two groups which are one having a surplus in their current account and other group having deficit balances. Results indicate that inflation is one main determinant to current account in all economies, whereas, world oil price and trade openness are found to have an impact on most economies.

Herrmann and Winkler (2009) suggest that other than macroeconomic variables, financial market and financial integration are important variables to not only determine but also to identify the dispersion in the current account. The results specify that developed financial markets and market integration can be considered as the gearing factor which results in divergence of current account balances of emerging Asian and European countries.

In that context Debelle and Faruqee (1996) using the saving-investment approach has conducted that cross-sectional study while using the data of 21 developing and 34 developed countries and identified the determinants of current over the time period of 1971 to 1993. The study identified that significant effect of government debt, relative income and demographic effects in long-run, however, in the short-run real exchange rate, terms of trade and terms of trade influence the current account. Moreover, Calderon, Chongand, and Loayza (2002) have extended the work of Debelle and Faruqee (1996) by using a further advanced econometric technique to empirically identify that how the macroeconomic variables proposed by literature can affect current account deficit by using a data set of 44 developing countries from 1966 to 1995. Rather than using a particular structural model, a reduced- form technique has been used and identified the transitory and permanent effects on the current account. The results indicate the persistence of deficit in current account among developing countries; growth in GDP leads to a higher current account deficit while a temporary increase in private or public saving have a positive effect on current account but becomes insignificant in long-term. At the same time an increase in terms of trade and appreciation in exchange rate resulting in higher current account deficit. However, in the case of developed countries and an increase in private or public saving, higher growth and a rise in international interest rate have a positive effect on the current account balance. Unlike_Calderon, Choengand, and Loayza (2002), Chin and Prasad (2003) followed a different technique and identified the medium-term determinants of the current account while making a comparison between eighteen industrial and seventy-one developing countries using a panel data from 1971-1995. Their results indicate the existence of a positive association between government budget balance, the initial stock of net foreign assets, and current account. However, their study found, openness to international trade and current account to be negatively correlated in the case of developing countries. The same model was extended further by Gruber and Kamin (2007) using a large sample data of sixty-one countries from 1982 to 2003 and tried to identify the imbalances in current account balances of the USA and Asian countries. They not only included the standard determinants of current account that is a fiscal balance, trade openness, per-capita income, and demographic variables but also incorporate the effect of the financial crisis on the current account. The results indicate that other than macroeconomic variables, the financial crisis does affect the current account surplus of Asian countries. Additionally, Chinn and Ito (2007, 2008) using the framework of Chin and Prasad (2003) argued that only the standard variables alone cannot determine the current account but at the same-time legal and financial environment do influence current account.

METHODOLOGY

This section lays down the methodological framework followed in this study, data used, and sources of data. This study implements current account model in line with saving-investment approach. Moreover, the inter-temporal approach has been followed for estimating current account determinants in selected countries. The empirical model used is adapted from the work of Yang (2010). Function for current account balance is given as:

$$CA = f(NFA, OPEN, ER, DRI) \ldots\ldots (1)$$

Where,
CA is the current account balance to GDP ratio,
NFA is the net foreign assets position to GDP ratio,
OPEN is the indicator of openness to international trade,
ER is the nominal exchange rate, and
DRI is the domestic relative income

Vector autoregressive (VAR) approach is used to investigate relationship between identified variables. Detailed VAR model can be described as following equation:

$$Xt = \mu + \Gamma 1 Xt-1 + \Gamma 2 Xt-2 + \cdots + \Gamma p Xt-p + \varepsilon_t \ldots\ldots (2)$$

Where,
X_t= (CA, NFA, OPEN, ER, DR) and is a (6×1) column vector
μ = is a constant term
Γ_i = indicate a (6×6) parameter matrix, as i = (1,2..., p)
ε_t = is a (6×1) matrix of, Gaussian errors

Johansen and Juselius (1990), and Johansen (1995) recommend that in case X_t comprises of k terms, integrated of order one, equation (2) can be arranged as a Vector Error Correction Model (VECM) – as follows:

$$\Delta Xt = \mu + \psi 1 \Delta Xt-1 + \psi 2 \Delta Xt-2 + \cdots \ldots \ldots + \psi p-1 \Delta Xt-p+1 + \Pi Xt-p + \varepsilon t \ldots\ldots\ldots (3)$$

Where,
ΔX_t= represents the first differenced
(i.e. $\Delta X_t = X_t - X_{t-1}$)
$\psi_i = -(I - \Gamma_1 - \Gamma_2 - \cdots - \Gamma_i)$
$\Pi = -(I - \Gamma_1 - \Gamma_2 - \cdots - \Gamma_p)$ i = (1,2 … . , p − 1)

If Π contains r, independent columns where $r<k$ and k is the number of variables in X , equation (2) that convergences to a long-run equilibrium: described by as $\Pi = \alpha\beta'$, where α and β both are (5×r) matrices. Matrix β contains the coefficients that define long-run equilibrium. Re-writing equation (3):

$$\Delta Xt = \mu + \psi 1 \Delta Xt-1 + \psi 2 \Delta Xt-2 + \cdots + \psi p-1 \Delta Xt-p+1 + (\beta' Xt-p) + \varepsilon t \ldots..(4)$$

In equation (4) $'X_{t-p}$ produces a maximum of *(k-1)* Cointegration relationship and ensuring that X_t are I(1). Converges to its long-run equilibrium. This study focuses

initially on the Cointegration technique to specify the long-run relationship among variables i.e. CA_t, NFA_t, $OPEN_t$, ER_t, DRI_t for each selected country. If the long-run relation exists then to determine the short run relation among the variables vector error correction model (VECM) will be used.

To analyze, current account determinants for India, Pakistan, Bangladesh, and Sri Lanka, this study uses annual time series data from the period from 1984 – 2015. Data has been obtained from World Development Indicators (WDI; World Bank). Definition and construction of variables, used in this study, are given below:

Net Foreign Assets (NFA)

Difference between value-of-assets, a country holds abroad and value-of domestic assets held by foreigners is its net foreign assets (NFA). This represents indebtedness of a country, or otherwise. NFA and current account said to have a positive relationship considering the fact that having a higher stock of assets abroad results in a healthy inflow of foreign-income, which in turn pushes the current account balance up.

Trade Openness (OPEN)

Calculated as the ratio of the sum of exports and imports to GDP; trade openness actually measures an economy's degree of openness to international trade, or trade restrictions vice versa. This variable is an indicator of macroeconomic policies of a country, affecting current account developments, in the long-run.

Domestic Relative Income (DRI)

Domestic relative income is a variable that depicts a stage of development effects for a specific country. It is the ratio of domestic real output to that of United States'. It is pertinent to note that in the early stages of development, a country's relative income will be on the lower side. During this stage, the current account remains in negative since the country is focused mostly on arranging inflow of capital to meet its external financing requirement. The case in a developed stage is changed and relative income attains higher levels. This is when the current account normally goes into surplus and the country becomes capable of exporting capital to less developed countries.

Nominal Exchange Rate (EX)

The nominal exchange rate is defined as the amount of domestic currency that is required to purchase a single unit of another foreign currency. In simple words, it is the rate at which one currency exchanges for another. This variable is important since any appreciation in the currency will lead to a drop in overall exports because of higher domestic price when compared to that in foreign countries. Reduced exports mean deficit in the current account. This necessarily may not be a bad thing as appreciation in currency increases buying power and ultimately reduction in the cost of production for domestic goods.

RESULTS

This section presents the empirical results of the analysis done for this study. The Augmented-Dickey-Fuller test has been used to check the stationarity of data. Results indicate that all variables are nonstationary. When applying the ADF test, the null hypothesis of a unit root is not rejected. Table 2 shows results of ADF-test on first difference for all variables. The null hypothesis of a unit root is rejected when the ADF is applied to all the variables for the first difference. It means that all the variables are stationary at first difference I(0).

Table 1: Augmented Dickey-Fuller (ADF) Test Results

	Current Account (CA)	Net Foreign Assets (NFA)	Trade Openness (OPEN)	Domestic Relative Income (DRI)	Exchange Rate (ER)
Bangladesh	-6.2800	-5.7250	-4.4389	-2.7360	-3.5727
	[0.000]	[0.000]	[0.001]	[0.234]	[0.012]
India	-5.7190	-3.8020	-6.3579	-2.7660	-4.7230
	[0.000]	[0.007]	[0.000]	[0.159]	[0.0007]
Pakistan	-5.4880	-4.4090	-7.5091	-3.6151	-3.5688
	[0.000]	[0.000]	[0.000]	[0.011]	[0.012]
Sri-Lanka	-7.9434	-5.7410	-5.0600	-2.7660	-4.1815
	[0.000]	[0.000]	[0.003]	[0.389]	[0.002]

Lag Order Selection for VAR

VAR analysis critically depends on the lag order selection of the VAR model. Therefore, the primary step in the empirical study is selecting, right lag order for each VAR - very important. The most commonly used strategy in empirical studies is to the lag order selection by some pre-specified criterion and to condition on this estimate in making the VAR estimates. In the VAR model comparing the SC values, the one which is minimum indicate the best lag order i.e. on how many lag values dependent variables depend on. The results in the table indicate that that the ideal lag length should be one for all variables.

Table 2: Lag Order Selection for Each Estimated VAR

Lag	Bangladesh	India	Pakistan	Sri-Lanka
0	-9.92970	-5.1967	-7.0888	-7.6751
1	-17.5623*	-15.9593*	-15.2566*	-16.2320*
2	-16.4430	-15.2440	-13.6257	-14.6779

Testing for Cointegration

Since all the variables are stationary at first- a difference that is they are integrated of the same order (one), therefore long-run relationship can be investigated by Johansen Cointegration technique. The below Table 4 indicates the results of Cointegration. There are two separate tests to measure the number of Cointegration relationships i.e. max-Eigen value (λ max) and trace statistic (λ max).

Table 3: Cointegration Results based on Trace

	H0: r=0 H1: r=1	H0: r≤0 H1: r≤1	H0: r≤2 H1: r≤3	H0: r≤3 H1: r≤4	H0: r≤4 H1: r≤5
Bangladesh	48.1014*	46.2849*	19.6941	12.4926	8.3970
	(0.0000)	(0.0000)	(0.1111)	(0.1592)	(0.0698)
India	58.8220*	39.0017*	14.3972	12.5132	6.6708
	(0.0000)	(0.0017)	(0.4272)	(0.1581)	(0.1449)
Pakistan	48.5041*	36.6015*	22.0870	14.0548	3.6458
	(0.0000)	(0.0038)	(0.0549)	(0.0951)	(0.4674)
Sri-Lanka	50.1479*	36.8727*	19.9696	17.3668	5.8585
	(0.0000)	(0.0035)	(0.1024)	(0.0292)	(0.2253)
Bangladesh	CA= 0.006NFA-0.059OPEN-0.000ER+10.7015DRI-0.381				
	[7.55]***	[4.33]***	[0.61]	[1.70]*	
India	CA= -0.092NFA+2.079OPEN-0.004ER+16.936DRI-0.708				
	[6.87]***	[5.51]***	[2.56]**	[3.53]***	
Pakistan	CA= -0.025NFA+2.054OPEN+0.003ER+287.881DRI+1.0365				
	[1.28]	[3.49]***	[1.32]	[6.90]***	
Sri-Lanka	CA= -0.263NFA+3.187OPEN-0.000ER-39830.24DRI+2.792				
		[2.18]**	[1.11]	[0.05]	[2.451]**

Table 4: Cointegration Results based on Maximum Eigenvalue

	Current Account (CA)	Net Foreign Assets (NFA)	Trade Openness (OPEN)	Domestic Relative Income (DRI)	Exchange Rate (ER)
Bangladesh	-2.85	-0.4552	1.6337	6.1593	-0.295
	[0.0622]	[0.887]	[0.999]	[1.000]	[0.9147]
India	-2.715	0.1624	-1.0105	6.96	-1.1651
	[0.0829]	[0.9655]	[0.737]	[1.000]	[0.6765]
Pakistan	-2.4619	-0.9971	-2.138	0.024	1.4376
	[0.1342]	[0.7418]	[0.2319]	[0.954]	[0.9987]
Sri-Lanka	-4.8725	-1.7307	-0.4949	5.1748	-0.0876
	[0.00004]	[0.4065]	[0.8792]	[1.000]	[0.9424]

According to given results for each selected economy, trace statistic (λ max) indicates that four Cointegration relationships exist for Bangladesh and Sri-Lanka respectively, however, for Pakistan three and for India two Cointegration relation exist at 5% level of significance. Moreover, max-Eigen value (λ max) also shows that two integrating vector relation exist among all the variables at a 5% level of significance. Therefore, both test statistics confirmed that there exists a long term relationship between the current account and explanatory variables.

Table 5: Long-Run Determinants of Current Account

Bangladesh	CA= 0.0068NFA	- 0.0595OPEN	- 0.0001ER	+10.7015DRI	- 0.0381
	[7.55]***	[4.33]***	[0.61]	[1.70]*	
India	CA= -0.0928NFA	+2.0790OPEN	-0.0041ER	+16.9362DRI	- 0.7080
	[6.87]***	[5.51]***	[2.56]**	[3.53]***	
Pakistan	CA =-0.0255NFA	+2.0546OPEN	+0.0037ER	- 287.884DRI	+ 1.0365
	[1.28]	[3.49]***	[1.32]	[6.90]***	
Sri-Lanka	CA = -0.2630 NFA	+3.1879OPEN	- 0.0006ER	- 3983.24DRI	+ 2.7925
	[2.18]**	[1.11]	[0.05]	[2.45]**	

Note: The values in brackets indicate the t-statistics. The *, **, *** shows the significance level at 1%, 5% and 10% respectively.

DISCUSSION

As the results suggest that there are two Cointegration vectors among all the variables, therefore, by imposing normalization on the current account (CA), the Cointegration equation can be used to examine the long-run determinants of the current account.

The long-run relation between the current account and the net foreign assets (NFA) is statistically significant for Bangladesh, India and Sri-Lanka at 1% and 5% level of significance respectively. However, the coefficient signs are different for each economy. In case of Bangladesh, the NFA is positively related with current account balance indicates that as the net foreign assets (NFA) increased the current account balance increased in long-run as well because of larger net investment earnings from abroad. The result is consistent with most of the existing empirical studies which normally found a direct relation between NFA and current account balance.

However, the NFA is negatively associated with a current account balance in long-run for India, and Sri-Lanka which is inconsistent with the usual finding in the literature. Nevertheless, considering the intertemporal approach; it can be mentioned that high amount of NFA could be used to operate the current account deficit for a prolonged time period. In the case of Pakistan NFA is insignificant which shows that it does not indicate any effect on current account in long-run.

Secondly, the coefficient of OPEN that indicates the trade openness is statistically significant at 1% for all the countries apart from Sri-Lanka. Although the coefficient sign is different across the countries. For Bangladesh, the estimated coefficients indicate a negative relationship between current account and trade openness which is concurrent with the empirical literature, Prasad and Chinn (2003). The negative relation indicates that trade liberalization strategies are predicted to decrease the current account. However, considering the case of India and Pakistan the coefficient of openness is positively related to current account balance that is inconsistent with the empirical literature. However, Lane (2000) suggests that a higher level of trade openness is related with greater output instability, which indicates that there is a need to mount up the net foreign assets to smooth the income level and diversify risk by acquiring current account surplus.

Thirdly, the coefficient of the exchange rate (ER) shows a negative relation with the current account (CA) for Bangladesh, India, and Sri-Lanka but positively associated in the case of Pakistan. The coefficient of ER is statistically significant only for India at 5% level of significance i.e. a rise in ER shows the appreciation of currency that results in a decrease in exports because it means that domestic price is higher as compared to foreign prices resulting in current account deficit.

Lastly, the coefficient of Domestic relative income (DRI) indicates statistically significant with the current account. For Bangladesh and India, the coefficient of DRI is positively associated with a current account at 10% and 1% level of significance respectively, suggesting that rise in national production will have a positive effect on current account balance i.e. by increasing the exports of a country. The results are consistent with the findings of Debelle and Faruqee (1996) that indicate that relative income which is measured as real GDP in relation to US output has a significant effect on the current account. However, in the situation of Pakistan and Sri Lanka DRI is negatively related with the current account at 1% and 5% level of significance, which rejects the "stages of development hypothesis" which supposes that developing countries have current account deficits because of the higher demand in foreign capitals.

Vector Error Correction Model

Since the Cointegration exists between the variables that indicate the long-term relationship among the variables. Therefore, VECM is used to evaluate the short-term properties of the integrated series.

Table 6: The VECM Results of Determinants of Current Account

	Bangladesh	India	Pakistan	Sri-Lanka
e_t	-0.7748	-0.0730	-0.1781	0.0480
	[2.912]***	[1.7522]*	[5.0446]***	[0.2666]
ΔCA(-1)	0.2193	-0.1800	-0.5694	-0.2557
	[1.3138]	[0.6994]	[3.2358]***	[1.0478]
ΔNFA(-1)	-0.0100	-0.0055	0.0080	-0.0057
	[1.9920]*	[2.0680]**	[2.2118]**	[1.1982]
ΔOPEN(-1)	-0.0257	0.0352	-0.0286	-0.1129
	[0.9662]	[0.6791]	[0.4301]	[0.5642]
ΔER(-1)	0.0020	0.0016	0.0051	0.0005
	[1.7771]*	[2.0180]**	[6.6094]***	[0.2112]
ΔDRI(-1)	71.4530	-2.5057	25.6636	-7.6844
	[2.7763]***	[1.6758]*	[1.0986]	[0.0543]

Note: *, ** and * denote the rejection of the null hypothesis at 10%, 5%, and 1% significance level respectively.**

The results show that error correction term coefficients are negatively signed and statistically significant at 10% and 1% respectively for Bangladesh, India, and Pakistan. It indicates that the system effectively converges to long-run equilibrium when there is a shock in the external system.

As indicated in the table, short-run determinants of the current account are not identical for all four selected economies. NFA has a negative short-run effect on Bangladesh and India and is significant at 10% and 5% level of significance respectively. However, in the case of Pakistan, NFA indicates a positive effect and is significant at 5% level of significance.

In case of India, trade openness shows positive effect in short-run on current account whereas, it shows negative effect for

Bangladesh, Pakistan, and Sri Lanka. Exchange rate shows a positive effect on current account for all the selected economies, in short-run, and significant at 10% and 5% level of significance respectively. Lastly, DRI shows a negative impact on the current account in short-run for India and Sri-Lanka but indicates positive relation in the case of Bangladesh and Pakistan.

CONCLUSION

The present study identifies the determinants of the current account for four of the major economies of the SAARC region (India, Pakistan, Bangladesh, and Siri Lanka). The four variables (Trade-Openness, Net Foreign Assets, Domestic Relative Income, and Exchange Rate) were tested for their long-run as well as short-run dynamics using data from 1984 to 2015.

Applied Cointegration test and VECM technique prove that tested variables impact on the current account, differently, across four selected countries. Results point to the significant long-run relationship of Net Foreign Assets, Trade Openness, and Domestic Relative Income and with current account for all the selected economies. The results also prove that NFA, OPEN, and DRI are more pertinent than the nominal exchange rate, in explaining movements in the current account on a long term basis, in the context of sampled countries. The disequilibrium-term, being the main factor in short-run current account variation, makes the current account to converge gradually towards equilibrium in the long-run.

The current account balance is one economic indicator that has the experts divided in their views of deficit and surplus balance in the current account. The deficit in the current account doesn't necessarily signify trouble for the economy. It can, rather, point to a growing economy and similarly having a surplus in the current account is not always a good thing. It may indicate to the economy slowing down or less open to international trade. Each side has strong arguments and data to support the stand-point. All this makes identifying determinants of the current account and dimensions of their relationship with each other and knowing how they interplay with each other is of critical importance. This paper has identified four such determinants that can impact the current account

This study was conducted limiting its scope to four of the several possible variables interplaying to move current account balance. There is a strong case for extending this research in future to bring in more of the identified variables impacting current account that include (but not limited to) domestic saving, investment, effects of capital account liberalization, and import substitution policies. The present study can be extended to study the behavior of the current account during the periods of the financial crisis in selected economies and isolate variables that policymakers could have addressed to avert the crisis.

REFERENCES

Ang, H. Y., & Sek, S. K. (2011). An empirical investigation on the determinants of current account balances. *International Journal of Advanced Computer Sciences*, *1*(4), 146-151.

Caballero, R. J., Farhi, E., & Gourinchas, P. O. (2008). An equilibrium model of global imbalances and low interest rates. *American Economic Review*, *98*(1), 358-93.

Calderon, C. A., Chong, A., & Loayza, N. V. (2002). Determinants of current account deficits in developing countries. *Contributions in Macroeconomics*, *2*(1).

Calderón, C., Chong, A., & Zanforlin, L. (2007). Current account deficits in Africa: Stylized facts and basic determinants. *Economic Development and Cultural Change*, *56*(1), 191-221.

Carrion-I-Silvestre, J. L., Camarero, M. & Tamarit, C. *External Imbalances in a Monetary Union. Does the Lawson Doctrine Apply to Europe?* (No. 259600036).

Chinn, M. D., & Prasad, E. S. (2003). Medium-term determinants of current accounts in industrial and developing countries: An empirical exploration. *Journal of International Economics*, *59*(1), 47-76.

Chinn, M. D., & Ito, H. (2007). Current account balances, financial development, and institutions: Assaying the world "saving glut". *Journal of International Money and Finance*, *26*(4), 546-569.

Das, D. K. (2016). Determinants of current account imbalance in the global economy: A dynamic panel analysis. *Journal of Economic Structures*, *5*(1), 8.

Debelle, G., & Faruqee, H. (1996). What determines the current account? A cross-sectional and panel approach.

Fratzscher, M., Müller, G. J., & Bussiere, M. (2004). *Current accounts dynamics in OECD and EU acceding countries-an intertemporal approach* (No. 311).

Glick, R., & Rogoff, K. (1995). Global versus country-specific productivity shocks and the current account. *Journal of Monetary Economics*, *35*(1), 159-192.

Ghosh, A. R. (1995). International capital mobility amongst the major countries: too little or too much? *The Economic Journal*, *105*(428), 107-128.

Ghosh, A. R., & Ostry, J. D. (1995). The current account in developing countries: A perspective from the consumption-smoothing approach. *The World Bank Economic Review*, *9*(2), 305-333.

Gossé, J. B., & Serranito, F. (2014). Long-run determinants of current accounts in OECD countries: Lessons for intra-European imbalances. *Economic Modelling*, *38*, 451-462.

Gourinchas, P. O., & Jeanne, O. (2013). Capital flows to developing countries: The allocation puzzle. *Review of Economic Studies*, *80*(4), 1484-1515

Gruber, J. W., & Kamin, S. B. (2007). Explaining the global pattern of current account imbalances. *Journal of International Money and Finance*, *26*(4), 500-522.

Herrmann, S., & Winkler, A. (2009). Real convergence, financial markets, and the current account–emerging Europe versus emerging Asia. *The North American Journal of Economics and Finance*, *20*(2), 100-123.

Johansen, S. & Juselius, K. (1990). Maximum likelihood estimation and inference on Cointegration-with applications to the demand for money. *Oxford Bulletin of Economics and Statistics*, *52*(2), 169-210.

Kim, S. (2015). Country characteristics and the effects of government consumption shocks on the current account and

real exchange rate. *Journal of International Economics*, *97*(2), 436-447.

Kraay, A. and J. Ventura. 2000. Current accounts in debtor and creditor countries. *The Quarterly Journal of Economics*, *115*(4), 1137-1166.

Lane, P. R. (2000). International investment positions: A cross-sectional analysis. *Journal of International Money and Finance*, *19*(4), 513-534.

Prat, J., Medina, L., & Thomas, M. A. H. (2010). *Current Account Balance Estimates for Emerging Market Economies* (No. 10-43). International Monetary Fund.

Nason, J. M., & Rogers, J. H. (2006). The present-value model of the current account has been rejected: Round up the usual suspects. *Journal of International Economics*, *68*(1), 159-187.

Oshota, S. O. (2015). Determinants of the current account balance in Nigeria, Ghana and Cote d'Ivoire. *Acta Universitatis Danubius. Œconomica*, *11*(3), 127-145.

Sadiku, L., Fetahi-Vehapi, M., Sadiku, M., & Berisha, N. (2015). The persistence and determinants of the current account deficit of FYROM: An empirical analysis. *Procedia Economics and Finance*, *33*, 90-102.

Sek, S. K., & Chuah, C. L. (2011). The dynamic of the current account in emerging East Asia: Does exchange rate matter? *International Journal of Trade, Economics, and Finance*, *2*(4), 293.

Yang, L. (2011). *An empirical analysis of current account determinants in emerging Asian economies* (No. E2011/10). Cardiff Economics Working Papers.