

Impact of Exchange Rate on Current Account Balance: Evidence from SAARC Countries

Javeria Masoom¹, Dr. Kalimullah Bhat², Dr. Adeel Arshad³ & Seemab Chaman⁴

¹Student, BS Banking and Finance, Department of Banking and Finance, University of Kotli Azad Jammu and Kashmir

²Assistant Professor, Department of Banking and Finance, University of Kotli Azad Jammu and Kashmir

³Lecturer, Department of Business Administration, University of Kotli Azad Jammu and Kashmir

⁴Lecturer, Department of Business Administration, University of Kotli Azad Jammu and Kashmir

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Corresponding Author:

Dr. Kalimullah Bhat

Email:

bhat_dufe@outlook.com

ABSTRACT

This study examines the impact of exchange rate on current account balance of SAARC economies. We collected data for the period 1995 to 2021. Where we select four countries as a sample, including Pakistan, Bangladesh, India and Srilanka. Data were collected from World Bank. We used several statistical techniques for analysis purpose, including correlation analysis, descriptive statistics, Unit root analysis, and Robust regression. The results show that exchange rate is negatively associated with current account balance of SAARC countries. This study can be helpful for the policy makers, like they can use our findings in the policy initiatives.



Introduction

Exchange rate plays important role in the economy. It has an impact on businesses and individuals. Foreign exchange reserves are considered as a crucial instrument for managing exchange rates (Nugee 2000; Sundararajan 2015). The exchange rate is crucial to international trade. In this era of globalization, exchange rate is a crucial consideration when any country wants to engage in international trade because lower exchange rates make exports cheaper and higher rates make them more expensive, and vice versa (Chowdhury, 1993). In the case of overseas investment, exchange rates may potentially dramatically increase risk and uncertainty.

Higher real exchange rates make domestic manufacturing less expensive, which leads to cheaper exports and more expensive imports, which has an impact on import and export prices (Nugee, 2000; Sundararajan, 2015). Onyinye (2012) points out that the exchange rate also affects a nation's trade. It is a crucial macroeconomic variable in international trade since macroeconomic variables like FDI, inflation, and GDP, among others. Changes in interest rates also affect the exchange rate. Since many external buyers will look to lend at the higher interest rate, lending foreign funds into the home currency, a higher interest rate in a home country will increase demand for domestic currency. There is also an association between exchange rate impact stock prices.

In this research the supporting theory is used is Modern theory of Balance of Payment Onyinye (2012). He claims that BOP is a systematic record of all economic transformations that occurred between one region and the entire world. BOP is an explanation of an expense with an invoice and a worldwide transaction. As, we pay imports by foreign currency, hence instability in exchange rate can affect current account balance.

We test the association of exchange rate with current account balance in SAARC countries. Most studies in Western countries (Adhikari, D 2018; Aregham et. al., .2018; Adjasi, C.2008), show that exchange rate affects the current account balance. However, different literature uncovers an enormous number of variables influencing long term current account balance (Chortareas 2000; Christie, A. 1982). While most empirical studies examine the effect of exchange rates on the current account balance have been conducted in developed countries, there is, to the best of the author's knowledge, no empirical evidence specifically supporting this relationship. This study aims to address that gap by examining the connection between exchange rates and the CAB. The primary objective is to explore how exchange rate fluctuations affect the CAB.

The study is the first to document that there is a negative connection between exchange rate movements and current account balance in SAARC countries. We also applied robust regression in this study to confirm our results. We found that results are consistence. So, exchange rate is important factor, and it affects current account balance negatively. Current study is contributing in a way that it can be helpful for the policy makers, like they can use our findings in the policy initiatives. In addition, researchers can also follow this study to examine the relationship in other countries.

The rest of the study is organized as follows, section two present hypotheses section, section three present the data and methodology, section four discusses the results finally, section five present the conclusion.

Hypothesis Development

Ali et al. (2015) explored the relation between current account balance and exchange rate, finding a negative correlation between the two. Similarly, Djamel et al. (2021) examined the effect of exchange rate fluctuations on the current account balance in Algeria and confirmed the existence of a connection. Adhikari (2018) also examined this relationship and reported a negative link between CAB and ER movements. In contrast, Adjasi et al. (2008) found a positive relationship between exchange rates and the current account balance.

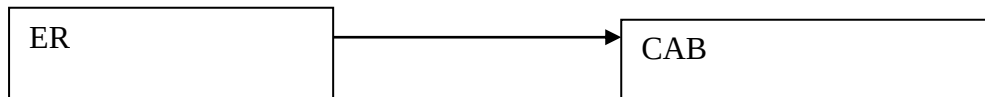
Oladipupo (2011) analyzed the effect of exchange rates on the current account balance, where it was noted that variables such as ER and GDP significantly influence the CAB. Hakeem et al. (2019) also identified a positive relationship between exchange rates and the current account balance. Additionally, Kumar et al. (2022) studied the relationship among the balance of payments, current account deficits, and exchange rates, highlighting a link between ER dynamics and the current account. Similarly, Aregham et al. (2018) confirmed the existence of such a relationship.

Based on the preceding discussion, we develop the following hypotheses

H0: There is a no relation of exchange rate with current account balance.

H1: There is a relation of exchange rate with current account balance.

Conceptual Framework



Data and Methodology

Sample and Methodology

The study did an experimental examination of the effect of exchange rate movements and current account deficit in SAARC nations. The sample of the study is 4 SAARC Countries including Pakistan, India, Srilanka, Bangladesh. The time period for data collection is 27 years from 1995 to 2021. In this study we use secondary data. The data of all variables are collected from World Bank. Data sources are World Bank. With the help of E-views the data of the current research has been analyzed. Data analyze by descriptive statistics, correlation analysis, unit root analysis, Regression and Robust least squares.

Econometric Model

To examine the connection between ER and CAB, we used the following regression equation:

$$CAB_{i,t} = \beta_0 + \beta_1 ER_{i,t} + \epsilon_{i,t}$$

Here CAB= current account balance β =Constant ER=Exchange rate i=Number of countries t=time ϵ = Error term

Table 1: Variables Measurement

Variables	Measurement	Data source
CAB: Current account balance	Word Bank Indicator	World Bank Indicators
ER: Exchange rate	Word Bank Indicator	World Bank Indicators
ϵ : error term	Error Term	

Result and Discussion

Table 2: Correlation Analysis

	CAB	LOGGER
CAB	1	-0.10313799
ER	-0.103137991	1

Table 2 reports the results of correlation analysis. The value of correlation between ER and CAB is -0.103137991 which shows association between the variables. To check the stationary of variables two test ADF & PP and Levin, Lin and Chu are applied, results can be seen as in table 3.. All the variables are found statistically significant. The probability of all variables is less than 0.05 it means data is stationary at first difference.

Table 3: Unit Root Test

Variable	ADF& PP		Levin, Lin& Chu		Level
ER (Exchange rate)	T-statistics	Probability	T- statistics	Probability	First difference
Common Intercept	41.2646	0.00	-5.35301	0.00	
Individual intercept	55.9473	0.00	-5.15325	0.00	First difference
CAB (Current account balance)					
Common Intercept	54.3236	0.00	-6.00408	0.00	First difference
Individual Intercept	64.719	0.00	-6.76471	0.00	First difference

Table 4: Regression Analysis

Dependent variable: CAB

Variable	Coefficient	Std.Error	t-Statistic	Prob.
ER	-0.933284	0.129056	-7.23164	0.00000
R-Square	0.010415			

Table 4 reports the results of panel regression with fixed effect where the coefficient of ER is -0.933284, value of t-statistic is -7.23164 and probability is 0.00000 which suggested that there is negative link between ER and CAB that is significant at 0.00000 levels. The value of R-square (total change between variables) is 0.010415.

Table 5: Robust Regression

Dependent Variable: CAB

	Co-efficient	Std. Error	z-Statistic	Prob.
ER	-0.835899	0.119933	-6.9697	0.000
R-squared	0.006374			

Table 5 reports the results of robust regression. The z- statistic and probability of ER is -6.9697 and 0.000 which show that there is negative significant relationship between ER and CAB. Robust least square validate our results which we already find panel least squares.

Discussion of Results

We find that exchange rate and current account balance are negatively and significantly associated in SAARC countries. Hence the null hypothesis is rejected and H1 is accepted. Our results support the findings of prior studies (Oladipupo, 2011; Adhilari, 2018; Hakeem, Hussein and abass, 2018)

Conclusion

The study did an empirical examination of the effect of ER on CAB in SAARC nations. The sample of the study is 4 SAARC Countries including Pakistan, India, Srilanka, Bangladesh. The time period for data collection is 27 years from 1995 to 2021. In this study we use secondary data. The data of all variables are collected from World Bank. Data sources are World Bank. With the help of E-views the data of the current research has been analyzed.

The study investigates the impact of ER and CAB of SAARC countries. The dependent variable of the study is CAB and independent variable is ER. We find that ER and CAB are negatively and significantly associated in SAARC countries. Hence the null hypothesis is rejected and H1 is accepted. Our results support the findings of prior studies (Oladipupo, 2011; Adhikari, 2018). Current study is contributing in a way that it can be helpful for the policy makers, like they can use our findings in the policy initiatives. In addition, researchers can also follow this study to examine the relationship in other countries

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