



Empirical Analysis of the Factors affecting Current Account Deficit in Pakistan

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Abstract

The maintenance of a balanced current account is among the enormous challenges faced by most of the developing economies. This study seeks to examine the determinative factors of the current account deficit in Pakistan over the period of 1976-2020. Assessment of these factors has been made within the stipulated structure of the ARDL model. Findings reveal that fiscal sustainability, sustainable economic growth, controlled inflation, and growth in gross saving are the reasons that help in stimulating the current account balances in the long run. This study also finds that exchange rate, money supply, and TOT were unable to change the position of the current account. Based on the empirical findings, it is recommended that government should concentrate on recognitions of channels that help in boosting the government revenue, accelerating the growth process, stimulating the gross saving, and maintaining a moderate level of inflation.

Key Words: Current Account Deficit, Fiscal Deficit, Economic Growth, Pakistan

JEL Classification:

Introduction

The current account is the systematic record of trading activities held by a nation with other nations of the world, including the balance of foreign investment ([Fayaz & Kaur, 2016](#)). Current account can be decomposed into four broader categories; *first*, income account (i.e. income generated abroad like wages, interest and dividends), *second*, direct transfer (like foreign aid, remittances, and FDI), *third*, trade account (i.e. trade balance), and *fourth*, assets income (i.e. appreciation/depreciation of an asset like bonds, securities, and real estate). One of the fundamental goals of every economy is to boost the revenues generating capacity of the country and create a surplus account. In most of the developing economies, alteration in the balances of these accounts normally leads to a current account deficit which, in turn, lead to deteriorating the economic growth in the long run ([Mukhtar & Khan, 2016](#)).

Running a deficit account for a shorter period is not always injurious to an economy as the objective of having CAD may exist in the form of supporting the infant industry

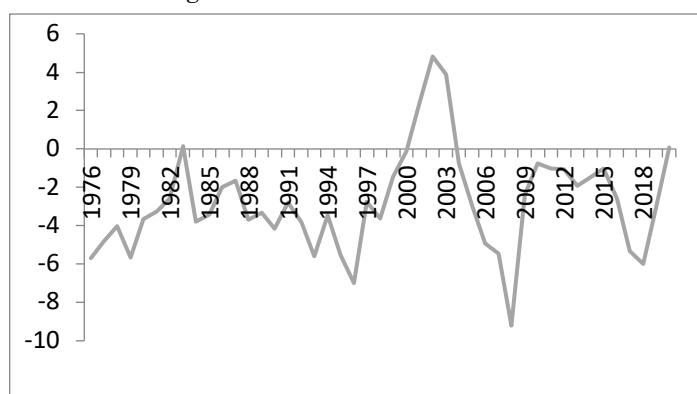
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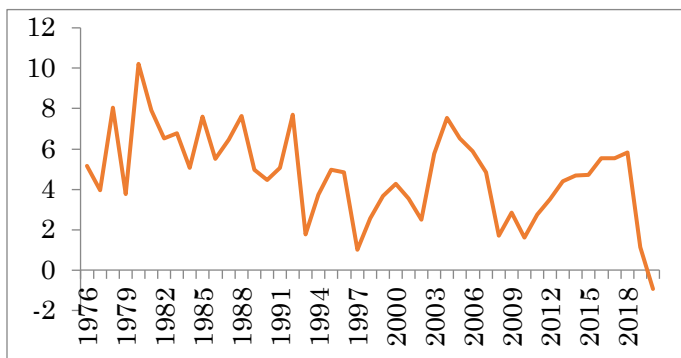
with the purpose to boost local productivity and increase government revenue. However, the adoption of such policies may hurt the economy in the long run. It is believed that countries who are running with persistent current account deficit normally suffer from different issues like capital flight caused by a loss in trust of the foreign investors, depreciation of the local currency, increase in foreign ownership of local assets, and growth in foreign indebtedness ([Bannaga, 2004](#); [Calvo, 2005](#); [AFM, 2006](#); [Krugman, 2008](#), [Minhajuddin, Azam & Tariq, 2020](#)). Similarly, researchers have also identified several causing factors of deterioration in this account, especially in developing economies. Division of such factors can be made in two broader categories, first, structural-deficit and second, cyclical-deficit. In this regard, structural defects in an economy in the form of lower-investment, lower-productivity, high-inflation, inadequate research environment, budget deficit, and the emergence of the competitive firm are declared to be the causes of structural-deficit. On the other hand, cyclical discrepancies in the form of the over-valued exchange rate, the existence of excessive external demand, the decline in exports sector, and the increase in imported technology are assumed to be the reasons of cyclical-deficit ([Calista, Furceri & Rusticelli, 2010](#)).

Several researchers have put their energies into digging out the root causes of the current account deficit. With regard to Pakistan, which is facing a persistent CAD since 1976, several studies have been made on investigating such factors, but no clear consensus has been developed that can fold them together. Combined, they are of the view that distortion in the external economy, persistent fiscal deficit, sluggish economic growth, over-valued exchange rate, and unfavorable TOT are the reasons of making distortion in this account ([Sadiku et al., 2015](#), [Minhajuddin, Azam & Tariq, 2020](#)). The worsening position of the saving-investment ratio and foreign indebtedness are also considered as reasons of current account deficit. This study is an attempt to reinvestigate this issue for many reasons; *first*, scarcity of literature as we find only a few studies ([Gulzar et al., 2007](#); [Jawaid & Raza, 2013](#); [Mukhtar & Khan, 2016](#)) that have focused on this topic, *second*, absentees of consensus in their results as they have portrayed a mixture of results on this topic, and *third*, conducting research for the extended and latest time period. Figure 1 and Figure 2 are the graphical presentation of the current account deficit growth in the GDP of Pakistan.



Graph 1: CAD as % of GDP

Source: World Development Indicators (2020)



Graph 2: Growth rate of GDP (in %)

Source: World Development Indicators (2020)

Based upon the controversies in the finding of researches carried Pakistan, this study seeks, *first*, to reinvestigate this issue and analyze the macroeconomic factors of CAD in Pakistan, and *second*, to recommend results-oriented suggestions for effective policymaking.

Literature Review

[Khan and Knight \(1983\)](#) investigated the factors of CAD for thirty-two non-oil emerging economies and concluded that downfall in industrial growth, unfavorable terms of trade, deterioration in fiscal imbalances, currency appreciation, and growth in the rate of interest are the causes of deterioration in current account balances. [Debelle and Faruquee \(1996\)](#) came with different conclusions while investigating this issue for 21 developed economies. They found that public debt and relative income are the factors that have a noteworthy impact on the position of CAD in these countries over the long run. Similarly, the same issue was investigated by [Loayza, Chong, and Calderon \(1999\)](#) in 44 least developed countries. They suggested that the governments of these countries should focus on minimizing the fiscal deficit, accelerating the economic productivity, and enhancing public savings for reducing this deficit. [Aristovnik and Zajc \(2001\)](#) found that economic growth, rate of interest, investment level, and exchange rate are the factors that bring variation in this deficit in 12 developing economies.

[Chete \(2001\)](#) investigated this issue and concluded that budget deficit, favorable TOT, and inflation are the crucial factors that decide about the position of this account in Nigeria. [Calderon, Chong, and Loayza \(2002\)](#) were of the view that global variation in economic productivity, domestic saving and inflation are the reasons that have the ability to bring constructive variation in this account in 44 emerging economies. [Chinn and Prasad \(2003\)](#) also analyzed this issue for 89 countries, a mixed sample of developed and least developed economies, and concluded that fiscal imbalances and unfavorable TOT are the root causes of deficit in this account. For [Doisy and Herve \(2003\)](#), these factors were relative income, per capita income, and fiscal imbalances. [Bussiere, Fratzscher, and Muller \(2004\)](#) focused on analyzing these factors for 33 countries and succeeded to determine that budget deficit, relative income, and relative investment are the crucial factors that decide about the fluctuation in the current account balances. [Bannaga \(2004\)](#) and [Zanghieri \(2004\)](#) found that budget deficit, economic growth, government reforms, and political stability are the factors that help in shaping the

current account deficit accordingly. Similar kinds of results were also portrayed by [Herrmann and Jochem \(2005\)](#).

[AFM \(2006\)](#) investigated this issue for Bangladesh and found that the position of the federal budget, domestic savings, exchange rate, purchasing power, and exports are the reasons of causing a deficit to the CAB. Among these, twin deficits were highlighted to be the crucial factors behind the sluggish position of the current account deficit. [Gulzar, Feng, and Yajie \(2007\)](#) also disclosed that foreign remittances and domestic saving are the crucial factors that help in bringing sustainability in CAB. [Gruber and Kamin \(2007\)](#) focused on investigating the global perspective of this issue for a sample of 61 countries. They found that deterioration in the position of fiscal deficit, economic productivity, institutional quality factors, and growth in per capita income plays a crucial role in fascinating the position of CAB. [Baharumshah and Lau \(2007\)](#) focused on investigating the relationship between twin deficits and CAD. For this purpose, they used granger causality and co-integration analysis. They highlighted a one-way causality link between these variables while running from budget deficit to trade deficit and from trade deficit to CAD. Rate of interest and exchange rate were found to be the mediating variables of the model. Similarly, [Kim et al. \(2009\)](#) succeeded to link the sustainability of the current account with the sustainability of economic growth.

[Morsy \(2009\)](#) triggered to find out the reasons of the current account deficit in 28 oil-exporting countries. He found that fiscal deficit and wealth of oil itself are the dominant reasons of bringing distortion in the CAB in these countries. For [Kwalingana and Nkuna \(2009\)](#), these reasons were barriers in foreign trade and the burden of foreign indebtedness. [Prat, Medina, and Thomas \(2010\)](#) investigated the determinants of CAD in 33 developing countries and concluded that discrepancies in the fiscal budget have a considerable role in the deterioration of CAB. In contrast, [Uz \(2010\)](#) found that the exchange rate is the sole factor behind this distortion. Similarly, Ang and Sek (2011) concluded that the exchange rate, the position of TOT, and the rate of inflation are the causes of creating an alteration in this account. For [Dam et al. \(2012\)](#), these reasons were the trade deficit, foreign indebtedness, and transfer payments. [Brissimis et al. \(2012\)](#) also examined the causes of CAD and found that the saving-investment gap is the sole cause of deterioration in the current account. However, the findings of Morsy (2012) were not in line with these findings as he highlighted that the position of the federal budget, oil prices, and oil products are the reasons of CAD in oil-producing countries. Similarly, [Jawaid and Raza \(2013\)](#) found that the sustainability of twin deficits is the sole cause of deterioration in the current account balances of Pakistan.

[Sadiku et al. \(2015\)](#) scrutinized this link and concluded that surplus in the federal budget, trade openness, and favorable TOT are the reasons of CAD. On the contrary, [Yurdakul and Cevher \(2015\)](#) noted that the exchange rate is the sole detrimental factor behind this distortion. Similarly, [Cavdar and Aydin \(2015\)](#) were of the view that inflation, fiscal expenditures, and unemployment are the causes of CAD. For [Oshota and Adeleke \(2015\)](#), these reasons were exchange rate variability, saving-investment gap, and money supply. [Fayaz and Kaur \(2016\)](#) examined this linkage and observed that imports reliance and worsening exchange rate are the factors that put pressure on the current account to deteriorate in India. For the same country, [Banday and Aneja \(2016\)](#) revealed that the existence of twin deficits are the sole cause of worsening CAD. Importantly, the pattern of causality was recognized to be bi-directional. Das (2016) investigated this issue for 44 countries and detected that growth sustainability,

acquisition of foreign assets, and sustainable exchange rate are the reasons for creating distortion in CAD. [Kovacevic \(2017\)](#) observed that exchange rate, inflows of foreign direct investment, and foreign remittances are creating imbalances in this account in 9 SEE countries. For Malaysia, these reasons were discovered to be the growth in real GDP and the value of money ([Kurniadi and Aimon, 2018](#)).

[Riaz, Javid, and Mubarik \(2019\)](#) investigated this issue for South Asian Economies and concluded that domestic income and foreign assets play a crucial role in this regard. [Afonso and Jalles \(2019\)](#) focused on investigating the determinants of variation in CAB in nineteen Euro countries. They, *first*, divided the whole sample into two broader categories, cyclical-sample, and non-cyclical sample, and *second*, they calculated the exports-elasticities and import-elasticities with respect to income for each country one by one. This study also ended with a mixture of results. TOT variable was the only variable that gave a positive response to both types of sample. [Tang \(2019\)](#) incorporated the impact of financial integration in the deficit-determinants model and concluded that an increase in bank credit extensively determines the position of CAD. An increase in the size of the stock market was found to reduce this deficit significantly. For [Wanjala, Kalio, and Kiprop \(2019\)](#), these reasons were foreign indebtedness, banking credit, fiscal balances, and exchange rate. [Narayan \(2020\)](#) noted that unanticipated internal shocks stand crucial in this regard. [Samsu and Ismail \(2020\)](#) found that trade openness, fiscal imbalances, and growth in per capita income has a strong connection with current account balances.

Methodology

The nature of this research is quantitative for which data is extracted from World Development Indicator (2020). This study has incorporated the saving, TOT, money supply, inflation, fiscal deficit, economic growth, and exchange rate variables in the deficit-determinants model for the purpose of highlighting the crucial factors behind the persistent current account deficit in Pakistan. Along with the ARDL model, this study is using the ADF test for recognition of unit root, ECM for finding the short-run dynamics, and some other tests for diagnosing the data. Figure 3 is the conceptual framework of this study.

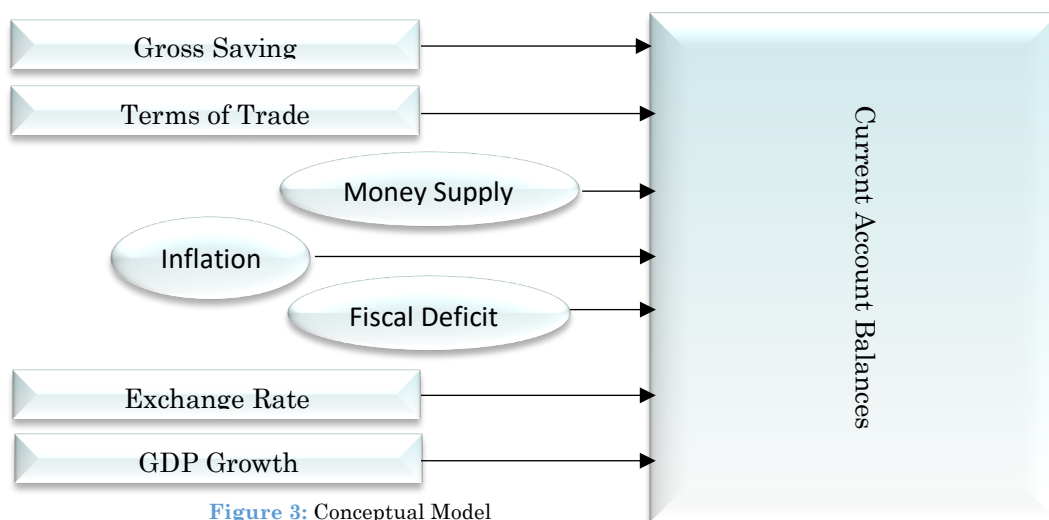


Figure 3: Conceptual Model
Source: Author's Compilation

Model Specification

The ARDL specification for this study will be as follows:

$$\Delta CAD_t = \phi_0 + \sum_{i=1}^z \phi_1 \Delta CAD_{t-i} + \sum_{i=1}^z \phi_2 \Delta GS_{t-i} + \sum_{i=1}^z \phi_3 \Delta TOT_{t-i} + \sum_{i=1}^z \phi_4 \Delta MS_{t-i} + \sum_{i=1}^z \phi_5 \Delta GDP_{t-i} + \sum_{i=1}^z \phi_6 \Delta FD_{t-i} + \sum_{i=1}^z \phi_7 \Delta ER_{t-i} + \sum_{i=1}^z \phi_8 \Delta INF_{t-i} + \vartheta_1 S_t + \vartheta_2 TOT_t + \vartheta_3 MS_t + \vartheta_4 GDP_t + \vartheta_5 BD_t + \vartheta_6 ER_t + \vartheta_7 INF_t + \rho_t \dots \dots \dots (1)$$

Table 1 presents a brief description of these variables.

Table 1. Description of Variables

| Variable | Description | Source |
|----------|------------------------------------|------------|
| CAD | Current account deficit (% of GDP) | |
| GS | Gross saving (% of GDP) | |
| TOT | Terms of trade (index) | |
| MS | Money supply (% of GDP) | WDI (2020) |
| GDP | Growth in GDP (%) | |
| FD | Fiscal deficit (% of GDP) | |
| ER | Exchange rate (ratio) | |
| INF | Inflation (CPI) | |

Since all variables of equation 1 were found stationary (see Table 2) either at level or at the first difference (i.e., combination of I₍₀₎ and I₍₁₎), therefore it is preferred to apply the ARDL model. In this regard, the log-term coefficients of this model will be estimated with the help of equation 2, whereas the short-term dynamics will be calculated with the help of equation 3. The F-bound test will be used for confirming the long-run cointegration among the variables. Appropriate diagnostic tests and normality tests are also conducted in this study.

$$\Delta CAD_t = \phi_0 + \sum_{i=1}^z \phi_1 \Delta CAD_{t-i} + \sum_{i=1}^z \phi_2 \Delta GS_{t-i} + \sum_{i=1}^z \phi_3 \Delta TOT_{t-i} + \sum_{i=1}^z \phi_4 \Delta MS_{t-i} + \sum_{i=1}^z \phi_5 \Delta GDP_{t-i} + \sum_{i=1}^z \phi_6 \Delta FD_{t-i} + \sum_{i=1}^z \phi_7 \Delta ER_{t-i} + \sum_{i=1}^z \phi_8 \Delta INF_{t-i} + \xi_t \dots \dots \dots (2)$$

$$\Delta CAD_t = \pi_0 + \sum_{i=1}^z \pi_1 \Delta CAD_{t-i} + \sum_{i=1}^z \pi_2 \Delta GS_{t-i} + \sum_{i=1}^z \pi_3 \Delta TOT_{t-i} + \sum_{i=1}^z \pi_4 \Delta MS_{t-i} + \sum_{i=1}^z \pi_5 \Delta GDP_{t-i} + \sum_{i=1}^z \pi_6 \Delta FD_{t-i} + \sum_{i=1}^z \pi_7 \Delta ER_{t-i} + \sum_{i=1}^z \pi_8 \Delta INF_{t-i} + \lambda ECM_{t-1} + \xi_t \dots (3)$$

Where: $\phi_1 - \phi_8$ = long-run coefficients
 $\pi_1 - \pi_8$ = short-run coefficients
 with $\lambda < 0$ and significant

Unit Root Results

Table 2 has summarized the results of this test. It depicts that all variables are stationary at level (i.e. L) or at the first difference (i.e. F); therefore, it is convenient and justifiable to regress this model within the framework of the ARDL model.

Table 2. Results of ADF

| Var. | ADF Test | |
|------|------------|--------------|
| | t-Stat. | Stationarity |
| CAD | -2.94712** | at L |
| GS | -3.98491* | at L |

| Var. | ADF Test | |
|------|------------|--------------|
| | t-Stat. | Stationarity |
| TOT | -7.07521* | at F |
| MS | -5.91671* | at F |
| GDP | -4.25483* | at L |
| FD | -2.96361** | at F |
| ER | -5.40252* | at F |
| INF | -4.63160* | at L |

*, & ** indicate the level of significance

F-Bound Test

Results of this test are shown in Table 3, which provide enough evidence for the existence of long-run cointegration among the variables.

Table 3. F-Bound Test

| C/F-Stat. | 3.9451 | |
|-----------|-----------|-----------|
| | L/B value | U/B value |
| 10 % | 2.032 | 3.131 |
| 5 % | 2.321 | 3.512 |
| 1 % | 2.964 | 3.856 |

Regression Results

Table 4 has summarized the results of the ARDL model. This table shows that, *first*, fiscal imbalances is positively and significantly affecting the CAD, *second*, economic growth, inflation, and domestic saving are negatively and significantly affecting this deficit; and *third*, the impact of money supply, exchange rate, and TOT was found insignificant. One percent increase in fiscal deficit was found to cause an almost 0.11 percent increase in the current account deficit. Similarly, one percent increase in GDP, inflation and domestic saving were found to bring a downfall in the current account deficit by 0.40 %, 0.21 %, and 0.34 %, respectively. The effects of these variables were found more severe than other variables of the model. Similarly, the short-run estimates of this model are summarized in Table 5, indicating that this model is convergent to the long-run equilibrium and that speed of adjustment is 0.55 %. Table 5 also depicts that, *first*, all variables, except fiscal deficit, are statistically significant in the short run as well, and *second*, all of them have got their expected signs in the short run.

Table 4. ARDL Results

| Var. | Coefficient | t-Stat. | Prob. |
|--------------------|-------------|----------|---------|
| (GS) _t | -0.34712* | -3.15471 | 0.00351 |
| (TOT) _t | 0.02134 | 0.77000 | 0.44692 |
| (MS) _t | -0.08962 | -0.98621 | 0.33142 |
| (GDP) _t | -0.40772** | -2.43392 | 0.02071 |
| (FD) _t | 0.11452** | 2.26374 | 0.03051 |
| (ER) _t | 0.02961 | 0.62123 | 0.53892 |
| (INF) _t | -0.2138** | -2.28110 | 0.02931 |
| C | 0.13991 | 0.67000 | 0.50751 |

* & ** indicate the levels of significance

Table 5. ECM Results

| Var. | Coefficient | t-Stat. | Prob. |
|------------------------|-------------|----------|--------|
| $\Delta(\text{GST})$ | -0.63941* | -9.83681 | 0.0000 |
| $\Delta(\text{TOT}_t)$ | 0.04621** | 2.71722 | 0.0104 |
| $\Delta(\text{MST})$ | -0.16041* | -2.76592 | 0.0092 |
| $\Delta(\text{GDP})$ | -0.32862* | -4.44551 | 0.0001 |
| $\Delta(\text{FDA})$ | 0.02140 | 1.02981 | 0.3106 |
| $\Delta(\text{ER}_t)$ | 0.08651** | 2.06850 | 0.0465 |
| $\Delta(\text{INF}_t)$ | -0.24042* | -4.79670 | 0.0000 |
| $\Delta(\text{ECM})$ | -0.55000* | -8.57371 | 0.0000 |

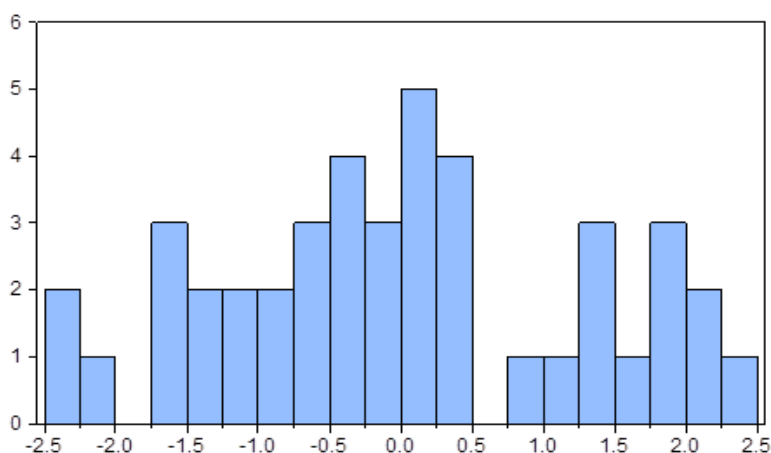
*, & ** indicate the levels of significance

Diagnostic Tests

A brief summary of the diagnostic tests (DT) is presented in Table 6, whereas a summary of the normality test is portrayed in Figure 4.

Table 6. Brief Summary of DT

| Tests | H _A | t-stat. | F-stat. | Conclusion |
|-------------|-----------------------------------|-----------------------|----------------------|-----------------------------|
| BG | Presence of serial correlation | ----- | 0.88291 (0.42410) | Reject H _A |
| BPG | Heteroscedasticity | ----- | 1.18432 (0.33710) | Reject H _A |
| Ramsey Test | Presence of Specification Error | 1.68100 (0.10281) | 2.82571 (0.10281) | Reject H _A |
| Jarque-Bera | Residual are distributed normally | 1.279235 (0.52749) | ----- | Can't Reject H _A |



Graph 4: Normality Test

Source: Author's Compilation

As a matter of comparison, these findings were consistent with the findings of [Jawaid and Raza \(2013\)](#), who also noticed that deterioration in the current account balance is

due to volatility in exchange rate, fiscal imbalances and worsening position of domestic saving. In Contrast, these estimates are in contradictions with the conclusions made by [Gulzar et al. \(2007\)](#) and [Mukhtar and Khan \(2016\)](#) who focused on variables other than what we have analyzed in this study.

Conclusion and Policy Recommendations

This study was aimed to uncover the factors which are responsible for the persistent current account deficit in Pakistan. Data period is from 1976 to 2020 and data is extracted from world development indicators (2020). Importantly, this data is analyzed within the stipulated structure of ARDL model. Gross saving, TOT, money supply, inflation, fiscal deficit, economic growth, and exchange rate variables are incorporated in the deficit-determinants model for the purpose of highlighting the crucial factors behind the persistent current account deficit in Pakistan. Results of the ADF test proposed the use of ARDL model for estimating the long run coefficients of the model. Along with ECM, this study has also used different types of diagnostic tests and normality tests in recognition of data accuracy and perfection of the model. Findings of this study revealed that, *first*, fiscal imbalances is positively and significantly affecting the CAD, *second*, economic growth, inflation, and domestic saving are negatively and significantly affecting the CAD, and *third*, the impact of money supply, exchange rate and TOT was found insignificant. One percent increase in fiscal deficit was found to cause almost 0.11% increase in current account deficit. Similarly, one percent increase in GDP, inflation and domestic saving were found to bring a downfall in current account deficit by 0.40%, 0.21%, and 0.34%, respectively. Results of the ECM depicted that model is convergent to the long-run equilibrium and that speed of adjustment is 0.55 %. Based on the empirical findings of this study, it is recommended that policymakers should focus on recognitions of channels that help in boosting the government revenue and reducing the fiscal deficit, accelerating the growth process, stimulating the gross saving, and maintaining a moderate level of inflation. Government can also emphasize on policies that helps in promoting the exports like import substitution and increasing the global competitiveness through the production of value added products. Use of monetary policy is also an option for bringing sustainability in the exchange rate which is essential for reducing the importing cost of foreign commodities.

Reference

- AFM, K. H. (2006). Determinants of current account deficit in developing countries: The case of Bangladesh. *Studies in Business Economics*, 12(1), 5-22.
- Afonso, A., & Jalles, J. T. (2019). Decomposing and analysing the determinants of current accounts' cyclicity: evidence from the Euro Area. *Open economies review*, 30(1), 133-156.
- Ang, H., & Sek, S. (2011). Empirical investigation on the determinants of current account balances. *International Journal of Advanced Computer Sciences*, 1(4), 146-151.
- Aristovnik, A., & Zajc, K. (2001). Current Account Performance and Fiscal Policy: Evidence on the Twin Deficits in Central and Eastern Europe. *Economics of Transition: Theory, Experience and EU Enlargement*, 121-140.
- Baharumshah, A. Z., & Lau, E. (2007). Dynamics of fiscal and current account deficits in Thailand: An empirical investigation. *Journal of Economic Studies*.
- Banday, U., & Aneja, R. (2016). How budget deficit and current account deficit are interrelated in Indian economy. *Theoretical & Applied Economics*, 23(1).
- Bannaga, A. A. (2004). Adjustment policies and the current account balance: empirical evidence from Sudan (No. 1650-2016-135982).
- Bitzis, G., Paleologos, J. M., & Papazoglou, C. (2008). The determinants of the greek current account deficit: the EMU experience. *Journal of International and Global Economic Studies*, 1(1), 105-122.
- Brissimis, S. N., Hondroyiannis, G., Papazoglou, C., Tsaveas, N. T., & Vasardani, M. A. (2012). Current account determinants and external sustainability in periods of structural change. *Economic Change and Restructuring*, 45(1-2), 71-95.
- Bussière, M., Fratzscher, M., & Müller, G. J. (2004). Current account dynamics in OECD and EU acceding countries-an intertemporal approach. *European Central Bank Working Paper Series*(311), 1-40. DOI: <https://www.econstor.eu/bitstream/10419/152745/1/ecbwp0311.pdf>
- Calderon, C. A., Chong, A., & Loayza, N. V. (2002). Determinants of current account deficits in developing countries. *The BE Journal of Macroeconomics*, 2(1), 1-44.
- Calista, C., Furceri, D., & Rusticelli, E. (2010). Structural and Cyclical Factors behind Current-Account Balances. *Economics Department Working Paper No. 775*.
- Calvo, G. A. (2005). Crises in emerging market economies: A global perspective: National Bureau of Economic Research. *NBER Working Paper No. 11305*.
- Cavdar, S. C., & Aydin, A. D. (2015). Understanding the factors behind current account deficit problem: A panel logit approach on 16 OECD member countries. *Procedia Economics and Finance*, 30, 187-194.
- Chete, L. N. (2001). Explaining current account behaviour in Nigeria. *The Nigerian Journal of Economic and Social Studies*, 43(2), 219-238.
- 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.
- Dam, M., Göçer, İ., Bulut, Ş., & Mercan, M. (2012). Determinants of Turkey current account deficit: An econometric analysis. Paper presented at the 3rd International Symposium on Sustainable Development (3rd ISSD), Sarajevo, Bosnia and Herzegovina.

- Debelle, G., & Faruquee, H. (1996). What determines the current account? A cross-sectional and panel approach. *International Monetary Fund Working Papers*, 96/58. DOI: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=882958
- Doisy, N., & Hervé, K. (2003). Current deficits of the Central and Eastern European (CEE) countries: what implications for them are entering the European Union and the euro area?. *International Economy*, 93(1), 59-88.
- Fayaz, M., & Kaur, S. (2016). Trends, patterns and determinants of Indian current account deficit. *Applied Econometrics and International Development*, 16(1), 167-186.
- 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.
- Gulzar, S., Feng, H. X., & Yajie, W. (2007). The current account balance of Pakistan 1972-2005: A cointegration analysis. *Information Technology Journal*, 6(5), 664-671.
- Herrmann, S., & Jochem, A. (2005). Determinants of current account developments in the central and east European EU member states-consequences for the enlargement of the euro area. Discussion Paper Series 1: *Economic Studies*, 32(2005), 1-52. DOI: <https://www.econstor.eu/bitstream/10419/19617/1/200532dkp.pdf>
- Jawaid, S. T., & Raza, S. A. (2013). Dynamics of current account deficit: A lesson from Pakistan. *Transition Studies Review*, 19(3), 357-366.
- Khan, M. S., & Knight, M. D. (1983). Determinants of current account balances of non-oil developing countries in the 1970s: an empirical analysis. *Staff Papers*, 30(4), 819-842.
- Kim, B. H., Min, H. G., Hwang, Y. S., & McDonald, J. A. (2009). Are Asian countries' current accounts sustainable? Deficits, even when associated with high investment, are not costless. *Journal of Policy Modeling*, 31(2), 163-179.
- Kovacevic, R. (2017). Current Account determinants in Southeast European (SEE) countries—panel approach. *Zbornik radova Ekonomskog fakulteta u Rijeci, časopis za ekonomsku teoriju i praksu-Proceedings of Rijeka Faculty of Economics, Journal of Economics and Business*, 35(2), 391-424.
- Krugman, P. R. (2008). *International economics: Theory and policy*, 8/E: Pearson Education India.
- Kurniadi, A. P., & Aimon, H. (2018). Determinants of the current account balance in Indonesia. *International Conferences on Educational, Social Sciences and Technology*, 178-186. DOI: <https://doi.org/10.24036/XXXXX>
- Kwalingana, S., & Nkuna, O. (2009). The determinants of current account imbalances in Malawi. MPRA Working Paper No. 14694
- Loayza, N., Chong, A., & Calderón, C. (1999). Determinants of current account deficits in developing countries: The World Bank.
- Minhajuddin, Khan, M. A., & Tariq, M. (2020). External debt – blessing or curse: Empirical evidence from Pakistan. *International Journal of Economics and Financial Issues*, 10(4), 235-246.
- Minhajuddin, Khan, M. A., and Tariq, M. (2020). External Debt and Public Investment: A Case Study of Pakistan. *Journal of Managerial Sciences*, 14(2), 108-117.
- Morsy, H. (2009). Current account determinants for oil-exporting countries (No. 9-28). International Monetary Fund.

- Morsy, H. (2012). Current account determinants for oil-exporting countries. *Emerging Markets Finance and Trade*, 48(3), 122-133.
- Mukhtar, T., & Khan, A. H. (2016). The current account deficit sustainability: an empirical investigation for Pakistan. *The Pakistan Development Review*, 397-419.
- Narayan, S. W. (2020). Asian current account balances and spillovers from a foreign country, a region and the United States. *Buletin Ekonomi Moneter Dan Perbankan*, 23(1), 1-24.
- Oshota, S. O., & Adeleke, I. A. (2015). Determinants of the current account balance in Nigeria, Ghana and Cote d'Ivoire. *Acta Universitatis Danubius. (Economica)*, 11(3), 127-145.
- Prat, J., Medina, L., & Thomas, M. A. H. (2010). Current Account Balance Estimates for Emerging Market Economies: International Monetary Fund.
- Riaz, F., Javid, A. Y., & Mubarak, F. (2019). Macroeconomic Determinants of Current Account in South-Asian Countries. *Paradigms*, 13(1), 104-110.
- Sadiku, L., Fetahi-Vehapi, M., Sadiku, M., & Berisha, N. (2015). The persistence and determinants of current account deficit of FYROM: an empirical analysis. *Procedia Economics and Finance*, 33, 90-102.
- Samsu, S. H., & Ismail, N. A. (2020). The Relationship Between The Current Account Balance And Its Determinants Of Selected Middle-Income Countries. *Quantum Journal of Social Sciences and Humanities*, 1(4), 1-14.
- Tang, D. (2019). Determinants of the Current Account Balances among Central and Eastern European Countries in the European Union. *European Review*, 27(2), 220-245.
- Uz, I. (2010). Determinants of current account: the relation between internal and external balances in Turkey. *Applied Econometrics and International Development*, 10(2), 115-126.
- Wanjala, K., Kalio, A. M., & Kiprop, S. (2019). A Pooled Mean Group Analysis on the Determinants of Current Account Balance in the East Africa Community. *International Journal of Science and Research (IJSR)*, 8(11), 270-277.
- World Development Indicators. (2021). The World Bank.
- Yurdakul, F., & Cevher, E. (2015). Determinants of current account deficit in Turkey: the conditional and partial Granger causality approach. *Procedia Economics and Finance*, 26, 92-100.
- Zanghieri, P. (2004). Current account dynamics in new EU Members: Sustainability and policy issues. Available at SSRN 871453.