The deterioration of current account balance in selected countries of MENA: Causes of concern

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Abstract

The purpose of this paper is to analyze the macroeconomic factors that influence the current account balance deterioration in the selected Middle East and North Africa MENA countries (Iran, Iraq, Jordan, Syria, Palestine, and Lebanon). Data from six MENA countries were analyzed using a panel-static approach. This study employs the Breusch-Pagan Lagrangian multiplier test, the pooled ordinary least squares model (OLS), and the random effect model (REM). The findings reveal that exchange rate (ER), interest rate (IR), and term of trade (ToT) are the main factors that influence the deterioration of the current account balance. The money supply (MS) and oil prices (OP) had negligible correlations with the current account balance. The study's findings suggest significant practical implications for policymakers and regulators in MENA countries. Given the significant influence of exchange rate (ER), interest rate (IR), and term of trade (ToT) on the current account balance, we recommend that the authorities in MENA countries implement policy reforms and macroeconomic adjustments to mitigate the current account balance deterioration. A deterioration in the current account balance began in 2018, sparking concerns in most MENA countries. The problem in the current account has led to various disadvantages in MENA countries, which will harm the economic health of the countries.

Contents

Contribution of this paper to the literature
This paper contributes to the existing literature by revealing and clarifying the impact of macroeconomic factors on the deterioration of the current account balance in emerging countries, such as the six Middle East and North African MENA countries selected in this study. Our findings provide valuable insights for central banks and policy-makers.

1. Introduction

Since the 2008 Global Financial Crisis, MENA countries have seen an increase in their current account deficits, which presents some economic difficulties for them. MENA countries are facing several negative consequences due to their current account imbalance, which will be detrimental to their economies. After economic liberalization in the 1980s, the Asian financial crisis in 1997, and the global financial crisis in 2008, Asian countries faced significant obstacles in international macroeconomic policy. However, the macroeconomic foundations have deteriorated to such an extent that many Asian and MENA countries have been grappling with the twin deficit issue for several years. In 2018, these countries had some of the largest budget deficits globally. Furthermore, according to the International Monetary Fund (2015), in 2018, the current account deficit grew to 2.9% of Gross Domestic Product GDP (Devadas & Loayza, 2018; Mustapha-Jaji & Alymkulova, 2022).

The lacklustre global economic activity in 2018 has continued into 2019, as reported by ICAEW (2019), and it has had an impact on the current accounts of Asian and MENA countries. Due to increased investment in Southeast Asia, the current account shrank from 2.75% of (GDP) in 2015 to 1.8% of (GDP) in 2019 (Ng, 2019). The architecture of the entire financial system influences the relationship between (OP) and (CAB). Regions where non-oil exports account for a significant share of total imports are unaffected by rising petroleum prices. People who import a large proportion of their oil are especially vulnerable to the effects of decreased (OP) (Sotoudeh & Worthington, 2016). There may also be an inverse relationship between (OP) and the value of a currency. A greater (OP) may be paid for with local currency that is depreciating, which lessens the impact of an increase in (OP) on import expenses. According to Luo and Qin (2017), countries with more flexible exchange rates are less susceptible to changes in oil prices.

In contrast, a rise in (OP) and (MS) can make (CAB) worse in countries with fixed exchange rates. Lastly, depending on domestic economic policy, (CAB) may be impacted by the influence of (OP) and (MS) in many ways. Reducing reliance on fossil fuels or promoting energy efficiency are two ways that policy might help offset the impact of growing (OP) and (MS) on (CAB).

The years 2018 and 2019 saw a rise in investment in Asian and MENA countries, with 39% of participants in the Association of Southeast Asian Nations ASEAN Financial Forum concurring that Asia offers the finest investment opportunities (Lee, 2019). If a country's financial account will rise and thus cause a larger current account deficit if it draws in more financial movements (Pettinger, 2017). According to Aristovnik (2006), the current account is the total of the trade balance and is a crucial measure of the stability of a country's growth and financial stability. However, the most worrisome economic condition for a country is its current account deficit, which throws its trade and foreign reserves out of balance. The nation's foreign assets are depleting as it imports more than it sells. The drivers of the economies of the MENA countries, as well as domestic private expenditures and the execution of policies and infrastructure projects, all have an impact on the imbalance in their current accounts.

The conditions in the MENA countries vary depending on how each nation shapes its economic performance. Focusing on Iran and Iraq, the current account situation has worsened since 2017 due to the impact of volatile oil prices. Similarly, the impact of volatile oil prices has led to a declining current account in Syria and Lebanon, prompting these governments to implement economic restructuring and policy changes (Chang, Mohsin, Gao, & Taghizadeh-Hesary, 2023; Kilian & Zhou, 2020; Rajakaruna & Suardi, 2021). Jordan, whose economy has deteriorated since 2013 due to a policy that promoted import operations, has adopted a similar strategy. In Iraq, however, the imbalance stems from increased import prices for petroleum and raw materials, which raise the cost of selling those goods (Çelgin, Eren, & Özlü, 2023).

Nevertheless, due to the successful measures put in place by the government, Palestine's current account has never seen significant volatility (International Monetary Fund, 2015). Conversely, Laos saw a twofold shortfall between 2009 and 2015. However, it has improved as a result of the nation's growing contributions from the manufacture of pharmaceutical and agricultural components (World Bank, 2018). In light of this, the purpose of this article is to examine the macroeconomic variables influencing the decline in the current accounts of a few MENA countries, such as Iran, Iraq, Jordan, Palestine, Syria, and Lebanon.

This study aims to investigate the macroeconomic factors that influence the deterioration of the current account balance in six selected MENA countries. The findings show that while the term of the trade (ToT) is favorably correlated with the current account balance (CAB), the exchange rate (ER) and interest rate (IR) have a substantial negative association with (CAB). Therefore, we can conclude that macroeconomic variables like interest rate (IR) and exchange rate (ER) significantly influence the capital account (CA) and current account balance (CAB), with the exchange rate (ER) being the most relevant.

The findings reveal a common and significant indication of macroeconomic imbalances in the current account. These days, macroeconomists are citing data showing how unsustainable circumstances developed before the financial crisis. We demonstrate, however, that policymakers can be readily persuaded by the seemingly benign real-time current account balance of certain MENA states since hindsight is 20/20.

The data is quite conflicting, but it is strong enough to imply that, in certain, if not most, situations, current account imbalance and deterioration can be a significant predictor. But remember that the signals given at the time may not have matched what is now clear. In light of this, one must evaluate the data accessible in real-time rather than the corrected data available today when determining whether the index acts as a warning sign for possible imbalances in the economy. By demonstrating that significant data modifications may compromise current account balances' predictive power in real-time, particularly in the Middle East and among the countries that we chose for this research, we significantly add to the existing wealth of knowledge on current account balances.

This study fills this gap in the literature by concentrating on the effects of terms of trade, interest rate, exchange rate, money supply and oil prices, and macroeconomic factors on the current account balances of a sample of six emerging market economies in the Middle East and North Africa. The goal is to adequately justify the new

contributions this paper makes to the literature, and to examine how these causes and their consequences vary from country to country.

In particular, we try to answer the following queries in this paper: What impact do macroeconomic variables such as the money supply, interest rates, terms of trade, real oil prices, and currency rates have on Middle Eastern emerging market economies' current account balances? What are the differences in these impacts between nations classified as energy importers or exporters and nations in developing markets? What differences exist between these impacts on commodities connected to oil (coal, natural gas, and oil)? In what ways do these consequences differ among nations based on their unique characteristics? Researching these topics is more critical today than in the past, as the shift away from fossil fuels is expected to worsen the problems caused by changes in crude oil prices.

Examining these topics is more crucial now than in the past, as the shift away from fossil fuels will likely have an even greater impact on oil prices, which will impact the current account balance of these MENA countries. These changes will compound the challenges presented by fluctuations in crude oil prices, terms of trade, interest rates, exchange rates, and the money supply.

As we will explain in the next section, the article contributes three distinct perspectives to the literature. First, we broaden our investigation to include the impacts of all of these factors to provide a richer understanding of the effects of macroeconomic factors. Although the existing literature concentrates solely on the impact of macroeconomic factors like oil prices, terms of trade, interest rates, exchange rates, and money supply, we include all of these effects in our analysis. Second, we explore the effects of macroeconomic determinants on a sample of six emerging market economies, encompassing the Middle East and North Africa, whereas the majority of research studies only look at individual oil importers or exporters or on a small group of importers/exporters in a specific geographical area.

This is done to get a deeper comprehension of the many elements, their impacts, and the reasons for worry that arise when these factors are applied specifically to the current account balance of these nations. Third, we look at how, more than previously believed, a broader range of Middle Eastern country characteristics influence how macroeconomic issues affect the current account balance of these six different countries.

We organize the remainder of the paper as follows: Section 2 discusses the literature review. Section 3 highlights the data and methodology. Section 4 covers the results and discussion. Section 5 offers conclusions and policy implications. Finally, Section 6 includes limitations and future research avenues.

2. Theoretical Background and Literature Review

Previous publications have contained a significant amount of current account literature. Historically, researchers have investigated numerous macroeconomic parameters such as the money supply, exchange rate, term of trade, price and use of energy, and interest rate. Extensive research has been conducted on how the exchange rate affects the current account, as demonstrated by Astuti, Oktavilia, and Rahman (2015); Purwono, Mucha, and Mubin (2018); Sahoo, Mallick, Mahalik, and Bekiros (2022); and Çelgin et al. (2023). These investigations have demonstrated that the exchange rate significantly and negatively impacts the current account balance. A stronger currency rate tends to lower import costs, which slows the current account's decline. To bolster that, research on current account balances in nations like Germany, Japan, Singapore, Norway, and Switzerland Das (2016) also yielded comparable results. Research demonstrates that an increase in the exchange rate leads to a decrease in the nation's savings, as people tend to import more items due to their increased affordability. As a result, savings will decrease, causing current account balances to fall.

Many policymakers and scholars regularly watch the current account balance because it provides incredibly significant information about the status of the economy under examination and indicates whether a country needs external finance. The trade balance for products has been the primary cause of the deficit, whereas the trade balance for services has always been positive. High tourism and transportation earnings have primarily caused the services account's consistent surplus. The income balance has also been negative due to the net international investment position's prolonged downward trend, but it has had less of an effect on the (CA) balance than the goods trade deficit.

The current account and money supply (MS) were found to be positively correlated (Danmola & Olateju, 2013; Oshota & Badejo, 2015; Shuaibu & Oyinlola, 2017; Yiğitbaş, 2017). A rise in the money supply will boost industry productivity and encourage exports, resulting in a current account surplus. For instance, Yiğitbaş (2017) asserted that Turkey's deficit was caused by the country's low savings rate and constrained government money supply. A larger money supply leads to less precautionary saving and facilitates the nation's efficient use of its cash reserves.

However, panel analysis research by Ousseini, Hu, and Aboubacar (2017) and Ya-Qiong and Rui (2013) demonstrates a negative relationship between money supply and current accounts. The preceding findings were supported by Ousseini et al. (2017), who demonstrated that an increase in the money supply will invariably lead to inflation, which will increase export expenses and deteriorate the current account. Previously, Destaings (2017) and Sadiku, Fetahi-Vehapi, Sadiku, and Berisha (2015) conducted research on the term of trade (ToT) and the current account. Higher export prices negatively correlate with improved trade, leading to a decline in real income and export revenue. This, in turn, tends to deteriorate the current account because it leads to less investment.

According to Khalfaoui, Sarwar, and Tiwari (2019), the (CAB's) energy-efficiency initiatives make it less susceptible to (OP). The implementation of renewable energy policies can decrease a nation's reliance on foreign oil while simultaneously increasing its trade surpluses. Nonetheless, studies by Ozdamar (2016), Sahoo et al. (2022), and Sumiyati (2022) have discovered a favourable correlation between the current account and the term of trade (ToT). A longer period of trade will result in reduced pricing for imported goods and services, which will raise demand. Over time, the manufacturing and export of high-tech products will require the use of imported items, which will result in a rise in the current account deficit (ToT). The nation will take proactive measures by encouraging more cautious saving and reducing investment when there is a larger term of trade fluctuations, which will result in a current account surplus.

According to Huntington (2015); Başarır and Erçakar (2016), and Bayraktar, Taha, and Yildiz (2016), a drop in oil prices will strengthen the nation's current account by lowering expenses and supplying inexpensive energy, which will enable it to undertake longer-term investments that will boost the current account. The current account has been found to have a considerable favourable effect (Longe, Adelokun, & Omitogun, 2018; Mucuk, Gerçeker, & Ay, 2013; Sahoo et al., 2022; Yurdakul & Cevher, 2015). For instance, Mucuk et al. (2013) assert that a global drop in the price of oil would increase demand because it is less expensive for oil-importing nations to import, which also tends

to alter the country's production structure and worsen its current account. However, an unimportant connection was discovered by Insel and Kayıkçı (2013). It makes sense that investment considerations have a greater impact on the current account and are not important in the short term.

Interest rates and current accounts have a favourable correlation, according to Ozdamar (2016) and Hassan (2019). The country's declining interest rates have increased demand for financing, which would boost import and consumer spending and expand the current account imbalance. On the other hand, according to Homaifar and Salimullah (2016), a rise in the interest rate on T-bills will result in a deficit in the current account. An increase in interest rates will raise manufacturing costs, which will restrict the number of suppliers or manufacturers in a given country. The current account deficit would consequently widen as a result of individuals having to import goods and services from overseas (Rajakaruna & Suardi, 2021). Previous research has assessed the unequal effect of (OP) on (CAB). Cui et al. (2022) looked at how (OP) adjustments between 1990 and 2015 had an uneven impact on developing countries (CABs). They discovered that (OP) shifts had a detrimental impact on a nation's (CAB). Additionally, they found that the influence of rising (OP) on (CAB) was greater than that of falling (OP).

In recent years, Kilian and Zhou (2022) investigated the relationship between (OP) and (CAB) in a sample of oil importers from 1995 to 2018, which included the countries of Thailand, Manila, Bangkok, and Singapore, as well as India, Singapore, Malaysia, and Indonesia. They found that, compared to any possible benefits, changes in (OP) had an overwhelming unfavourable effect on (CAB). Additionally, they found that when the (OP) was rising rather than falling, the imbalance was more noticeable. Additionally, they discovered that the countries most affected by OP on their (CAB) were those with strict exchange rate rules and high reliance on oil imports.

The relationship between (OP) and (CAB) has been the subject of several investigations, although the findings have been inconsistent. There is a favourable link between (OP) and (CAB), according to prior studies. On the other hand, the results of several additional investigations disagree. According to Dutta, Bouri, and Noor (2021) OP significantly improved the capital account balances of the Gulf Cooperation Council (GCC) nations. In a similar vein, Narayan and Nasiri (2020) discovered that (OP) shocks significantly improved Saudi Arabia's capital account balance.

In contrast, Filis (2010) found that while growing (OP) harmed the Kingdom, it had no appreciable effect on the nation's capital account. There have been attempts to look into how (OP) impacts developing countries that are net commodity importers. However, because it is assumed that the influence is symmetrical, most research has neglected any potential differences in how changes in (OP) affect (CAB). The impact of changing (OP) on a nation's (CAB) is thought to remain continuous. In actuality, though, this could not hold due to a variety of factors like heterogeneity, trade liberalization, and economic structure.

The relationship between the current account balance and macroeconomic variables, including the price of oil, the currency rate, the interest rate, and the trade surpluses or deficits of countries that purchase oil, has long piqued the attention of economists. Several academic studies have examined the relationship between oil prices and the expansion of developing economies. The (CAB) of several countries has responded to changes in (OP) asymmetrically, indicating that the effects of rising and falling (OP) are not comparable (Çelgin et al., 2023).

Moreover, to evaluate how (OP) influenced the (CAB) of oil-importing countries like China, Singapore, Japan, and France between 2005 and 2020, Yang and Zhou (2020) looked at the 2005-2020 time frame. According to their research, (OP) modifications have varying effects on a nation's (CAB). They also found that when the (OP) grew compared to when it dropped, the asymmetry was more pronounced. Additionally, they observed that countries with strict exchange rate policies and a greater dependence on oil imports were more susceptible to variations in oil prices. Additionally, several studies have looked at the reasons behind oil's uneven influence on trade balances.

The research that is currently available indicates that there is a nonlinear link between macroeconomic variables and the current account balance in many emerging nations. Increasing (OP) generally has a more negative and noticeable impact on (CAB) than reducing (OP). Furthermore, the difference is particularly pronounced in nations with stringent currency rate laws and high reliance on oil imports. Not accounting for asymmetry in effects led to knowledge loss and erroneous conclusions. Additionally, prior studies have repeatedly shown that panel data performs better than time series data. Panel data presents some difficulties, including improper generalization, measurement manipulation, and model selection.

The impacts of (CAB) with (OP) propensity and MS cannot be universally generalized across countries due to the unpredictability of these components like (OP) and (MS) in panel data. It is thus advised to apply the Quantile-on-Quantile Regression (QQR) approach, a particular technique that looks at each country independently. We investigated the effects of additional macroeconomic variables and factors, such as the exchange rate (ER), interest rate (IR), and term of trade (ToT), on the current account balance in addition to the price of oil and money supply, but we did not employ this approach; instead, we utilized fixed panel data or panel data static in this study, such as (POLS) and (REM).

The following succinctly describes the gaps in the present research: Despite the widespread acknowledgement of the overall beneficial impact of macroeconomic variables on the current account balance, the spatially varied impacts on equity and the price of oil remain a subject of ongoing debate. Second, there is a significant lack of research on the effects of other economic variables, particularly stock returns and foreign direct investment, despite a wealth of studies on the influence of macroeconomic factors, oil prices, and money supply on the current account balance. Third, the few empirical studies that are currently available concentrate on the impacts of common fixed factors, frequently ignoring the combined geographical and economic implications throughout the region. It can be hard to tell the difference between the specific effects of these fixed links and the more general effects of microeconomic variables such as market equilibrium and competition, demand and supply, how prices are set, how easy it is to find information on the market, perfect competition, and financial disclosures. A thorough examination of the local and micro consequences is also necessary to comprehend the wider advantages of a declining current account balance.

This paper makes a substantial contribution to the corpus of knowledge about the impact of macroeconomic variables on the current account balance. This research examines the equal and uneven effects of the oil price on the current account balances of six MENA countries: Iran and Iraq, two oil possessors, and four oil importers. The findings show that the price of oil significantly and unevenly impacts the difference between the two. This analysis demonstrates that the exchange rate and interest rate have an impact on the price of oil; a higher rate is linked to a decline in the current account balance, while a lower price of oil has just a slight positive impact.

The findings are significant because they provide insight into how the current account balance of countries that import oil responds to fluctuations in the price of oil (PO), interest rate (IR), exchange rate (ER), and term of trade

24

(ToT) for policymakers and investors in such countries. In essence, our work demonstrates the influence of these interactions between the current account balance and the price of oil. Additionally, it offers policymakers crucial direction as they oversee their economies in the face of operational policy variations.

3. Data and Methodology

The main objective of this research is to find out how macroeconomic factors in six selected MENA nations impact the current account's drop. These countries are Iraq, Iran, Jordan, Syria, Lebanon, and Palestine. This study looks at the money supply (MS), terms of trade (ToT), exchange rate (ER), oil prices (OP), and interest rates (IR) to see how macroeconomic factors impact the current account balance (CAB). The estimating model is therefore configured as follows:

$$CAB_{it} = \alpha_0 + \beta_1 ER_{i,t} + \beta_2 MS_{i,t} + \beta_3 ToT_{i,t} + \beta_4 OP_{i,t} + \beta_5 IR_{i,t} + \varepsilon_{it} \qquad (1)$$

The symbol (CAB) represents the current account balance. The symbols (MS) and (ER), respectively, indicate the money supply and exchange rate. The term of trade is represented by (ToT). (OP) stands for the price of oil, and (IR) for the interest rate. In addition, the model has (ε) for the error term, (i) for the panel's sample units, and (t) for the sample's period. For analysis, the panel data estimation approach is applied. The panel data estimation approach guides the analysis. The panel data model has the advantage of managing data constraints and variable heterogeneity. Furthermore, testing more intricate behavioural models is acceptable for this estimate approach. We evaluate three-panel static models to get the outcome. These consist of the Fixed Effect Model (FEM), the Random Effect Model (REM), and the Pooled Ordinary Least Square Model (POLS). The following is the equation for pooled ordinary least squares:

$$Y_{i,t} = \alpha + \beta_1 X_{i,t} + \varepsilon_{i,t} \qquad (2)$$

However, the Random Effect Model uses the following equation:

$$Y_{i,t} = \alpha + \beta_1 X_{i,t} + \left(\varepsilon_{i,t} + \mu_{i,t}\right) \qquad (3)$$

The Breusch Pagan Lagrangian multiplier test has been used to examine whether to select the Random Effect Model (REM) or the Pooled Ordinary Least Square Model (POLS). The following is the set of hypotheses:

H_0. Choose Pooled Ordinary Least Square Model (POLS).
H_1. Choose the Random Effect Model (REM).

The random effect model (REM) is employed, and the H_0 is rejected if the probability of the Chi² is less than 0.05. The Fixed Effect Model (FEM) can be used to expand the research in the following ways:

$$Y_{i,t} = \alpha_i + \beta_1 X_{i,t} + \varepsilon_{i,t} \qquad (4)$$

The study can continue to determine which model to use, a fixed effect model or a random effect model, after using the Hausman Fixed Test. The Hausman Fixed Test's conjecture is:

H_0. Choose a Random Effect Model (REM).
H_1. Choose a Fixed Effect Model (FEM).

The Chi² value must be less than 0.05 to select the Fixed Effect Model (FEM) for the Hausman Fixed Test. This means that the study may go on to the Fixed Effect Model (FEM), and H_1 is accepted.

4. Empirical Results and Discussion

To comprehend the link between the current account balance and macroeconomic variables including the exchange rate, interest rate, term of trade, oil price, and money supply, the empirical model in Equation 1 was developed. By concentrating on these affecting variables and calculating Equation 2, we expand our study. Regressions using current account models are comparable to (1). The current account balance due to macroeconomic factors is presented in Table 1.

The ratio of the (CA) balance to the other variables is the dependent variable in a simple regression, and Table 1 presents the findings of this analysis. Model (1), as an estimate of a basic model, uses the change in the oil price, money supply (as a percentage of the current account balance), term of trade, interest rates, and exchange rates as independent variables. It also takes advantage of the quarterly change in the real exchange rate. We test up to four periods for each independent variable, keeping only those with statistically significant coefficient estimates, and then choose the specifications with the lowest Schwartz Information Criterion (SIC) for deciding the period duration.

The findings of the regression show that the (CAB) ratio is inflexible concerning the trade term, interest rate, and exchange rate. The findings show that an increase of one percentage point in the money supply and oil price relative to the current account balance causes the current account deficit to rise by around 0.21 percentage points over the same period. We find that the first two prices have statistically negligible coefficient estimates, whereas the second two prices have high coefficient estimates when we try to experiment with different periods in the interest rate and exchange rate. We only keep the contemporaneous value of the current account balance variable since adding the second two prices raises the (SIC). The identical logic is used to determine the first exchange rate, and it is determined that when just the first rate is used in the Real Effective Exchange Rate (REER), the model has the lowest (SIC) value. The current account deficit rises in tandem with an increase in the real exchange rate. This finding suggests that a decline in the local currency's value, or a decline in the actual exchange rate, has a beneficial impact on the current account balance.

Table 1. Current account balance to macroeconomic factors.

Variables	1	2	3	4
$CAB/ER_{i,t}$	–0.07***	–0.07***	–0.07	–0.07***
	(0.04)	(0.04)	(0.04)	(0.04)
$CAB/MS_{i,t}$	–0.34***	–0.34***	–0.34***	–0.34***
	(0.02)	(0.02)	(0.02)	(0.02)
$CAB/ToT_{i,t}$	0.05*	0.05*	0.05	0.05
	(0.07)	(0.07)	(0.07)	(0.07)
$CAB/OP_{i,t}$	0.08*	0.08*	0.08	0.08
	(0.11)	(0.11)	(0.11)	(0.11)
$CAB/IR_{i,t}$	–0.09***	–0.09***	–0.09***	–0.09***
	(0.03)	(0.03)	(0.03)	(0.03)
Constant	0.81***	0.81***	0.81***	0.81***
	(0.27)	(0.27)	(0.27)	(0.27)
R^2	0.88	0.88	0.89	0.89
Adjusted R^2	0.83	0.83	0.83	0.83

Note: * and *** indicate significance at the 1%, and 10% levels, respectively.

The (ToT) variable is included in the second model, and its regression coefficients are nearly identical to those of the first model. Stated differently, the coefficient estimates for the other variables on the right-hand side remain unchanged with the addition of the (ToT) variable. The ratio of export prices to import prices, or the coefficient of the (ToT) variable, is predicted to be positive but not statistically significant. Models (3) and (4) include the interest rate and currency rate as independent explanatory variables. Model (1) utilized the high correlation between the interest rate and exchange rate variables to address potential multicollinearity, resulting in identical coefficient estimates for Models (3) and (4). By appending the (ToT) variable to models (3) and (4), respectively, models (2) and (3) were calculated.

The addition of the ToT variable often does not significantly alter the outcomes of the interest rate and exchange rate. Therefore, we considered the regression results for Model (2) as the primary findings, approximating the other results for reliability purposes. The current account deficit grows by -0.34 points and 0.08 points for every percentage point increase in oil prices and money supply, respectively, but the deficit increases by -0.09 points for every percentage point increase in both. Stated differently, the money supply doubles the amount of the current account balance relative to the price of oil (PO).

In the estimation process, we also include dummies, which are critical for all requirements. Numerous diagnostic tests are carried out to guarantee the results' robustness. We use the Variance Inflation Factor (VIF) to verify the existence of a multicollinearity issue. Statistics on multicollinearity are a trustworthy way to determine whether a regression analysis is legitimate. Table 2 computes the Variance Inflation Factor (VIF) and the tolerance threshold.

Table 2. Variance inflation factor (VIF).

Variables	VIF	1/VIF
ER	3.11	0.2873
MS	2.26	0.3899
ToT	1.97	0.4297
OP	1.81	0.4862
IR	1.03	0.9986
Mean VIF	2.06	0.3682

The study adheres to the guidelines (Gujarati, 2014) that the (VIF) value should be less than 5 and the 1/VIF value should be closer to zero to guarantee the validity of the analysis. The mean (VIF) was discovered to be 2.06 below the five cutoff points. Consequently, this requirement has been satisfied, and the outcome shows that multicollinearity was not present in the regression analysis. Heteroscedasticity is a diagnostic test that looks for instances when the error term size varies among the independent variable's values. The Cook-Weisberg or Breusch Pagan test is used to make sure the issue is not present. According to the results, Chi^2 (1) = 11.23, Prob > Chi^2 = 0.0006.

This investigation is heteroscedastic because the probability value is less than 0.01. However, the robust heteroscedasticity standard error approach may be used to address the heteroscedasticity problem, as per Stock and Watson (2008), who suggest using the robust heteroscedasticity standard error approach to address the heteroscedasticity problem. One can determine the model by analyzing the results of a series of experiments. We use the Breusch Pagan test to assess the suitability of the pooled (POLS) and random effect model (REM) in determining the most accurate model estimates. The more suitable model between the Fixed Effect Model (FEM) and the Regression Event Model (REM) is determined using the Hausman test. The validity of the result was discovered to be more convenient for (REM), so Table 3's findings will be investigated using this model.

Table 3. Random effect model (REM).

Variables	Coefficient	Z	P > Z
ER	0.0031	-2.83	0.019
MS	0.0062	-0.98	0.306
ToT	0.0006	2.25	0.010
OP	0.0000	1.02	0.243
IR	–0.0011	-2.87	0.007
C	0.03642	-1.23	0.289

Based on Table 1's results, the regression model's R-squared (R^2) is 0.88, meaning that all of the independent variables utilized can account for 88% of the variation in the current account. All of the independent variables together are significant in explaining the current account deterioration, as indicated by the likelihood of the F-statistics (0.00). Table 3 indicates that there is an anticipated negative link between the exchange rate (ER) and a current account. At the 5% alpha threshold of significance, the association is noteworthy. The current account deficit will decrease with a rise in the (ER), as shown by Astuti et al. (2015), Purwono et al. (2018), and Sahoo et al. (2022). It is hypothesized that a higher exchange rate will reduce the nation's savings because individuals will import more items since they are more affordable. As a result, savings will decline, which will cause current account balances to drop.

Unexpectedly, the money supply (MS) displays a negative sign. The finding's negligible association suggests that modifications to (MS) have little effect on the current account. The results contradict those of earlier research (Ousseini et al., 2017; Ya-Qiong & Rui, 2013). This suggests that whereas MS has a minor impact on foreign variables like the current account, it has a significant impact on internal factors like production and inflation in MENA countries.

The link between the term of the trade (ToT) and the current account is positive; the coefficient value is 0.0006. At the 0.05 level of significance, the (ToT) has an impact on the current account that is noteworthy. A higher (ToT) will result in less expensive imports, which will support future export activity and be used for production. As a result, increased exports will suggest that a nation has a current account surplus. The results align with the works of Ozdamar (2016); Sahoo et al. (2022), and Sumiyati (2022). A longer period of trade will result in reduced pricing for imported goods and services, which will raise demand.

However, the utilization of imported commodities to produce and export highly technologically advanced goods will lead to a rise in the current account in the long run. The nation will take proactive measures by encouraging more cautious saving and reducing investment when there is a larger term of trade volatility, which will result in a current account surplus. (ToT) has benefited the capital account (CA) because some nations have taken steps to prevent its effects, such as implementing greater precautionary saving earlier. (ToT) has benefited the capital account (CA) since some nations have made the effort to prevent the effects by, for example, implementing greater precautionary saving sooner. As a result, a higher ToT will have a beneficial effect on the current account.

There is a positive correlation between the oil price (OP) and the capital account (CA). The degree to which MENA countries rely on oil prices determines how the capital account (CA) and the open market (OP) relate to each other. Countries that rely on oil imports have benefited from the decreased price because it would reduce expenses and increase the current account imbalance. Variations in the price of oil will impact different industries. While other sectors are less impacted, the transportation and logistics industry will be the primary target of fluctuations in oil prices (OP). However, we determine the association to be negligible, suggesting the absence of a substantial relationship.

It has been discovered that the capital account (CA) and interest rate (IR) have a positive connection. The results contradict those of earlier research (Hassan, 2019; Ozdamar, 2016). The argument that higher interest rates lead to increased expenses and a shortage of suppliers could potentially educate consumers. As a result, imports rise as individuals search for suppliers overseas, which ultimately causes the current account to fall. Higher costs may cause a shortage of suppliers within the country and will likely push consumers in the MENA to look for suppliers outside, increasing imports and decreasing the country's current account.

5. Conclusion and Policy Implications

This study investigates and focuses on the macroeconomic variables that affect the decline in the current account balance of eight chosen MENA countries. The findings show that while the term of trade (ToT) has a positive association with the current account balance, the exchange rate (ER) and interest rate (IR) have a substantial negative link with the current account balance (CAB). Therefore, we can conclude that macroeconomic variables like interest rate (IR) and equity ratio (ER) significantly influence the capital account (CA) and current account balance (CAB), with ER being the most relevant.

Our econometric analysis demonstrates that macroeconomic variables like the interest rate, exchange rate, and term of trade have a positive and significant impact on the current account balance. These effects vary depending on the amount of money in circulation, the amount of imported oil, exchange rate regimes, and structural aspects of the domestic economy. As a result, variations in interest rates (IR) have the potential to significantly impact the current account balance of MENA countries, underscoring the importance of prudently adjusting domestic interest rates to encourage investment and output within the economy.

However, research shows that neither the money supply (MS) nor the price of oil (OP) significantly affect the capital account (CA). Therefore, we advise MENA countries to closely monitor the macroeconomic factors affecting the current account to maintain a sound economic balance. We also urge the governments of these nations to implement macroeconomic modifications and policy changes to tackle the issues caused by the decline in the current account balance (CAB).

The effects of macroeconomic variables on the current account balance of developing countries, like the MENA countries that made up the study's sample, have significant policy implications, including that diversifying their energy sources should be the top aim for emerging countries to lessen their reliance on oil imports. Initiatives to improve energy efficiency and financial investments in clean energy sources like solar and wind power are two examples. Developing nations that are heavily dependent on oil imports should establish stability funds to mitigate the impact of operational policy changes on their trade balances. You can use the saved money to control inflation during high oil prices or assist governments in keeping spending within reasonable limits during low prices.

To diversify their economies and lessen their reliance on oil imports, MENA countries need to endeavour to establish non-oil export industries. This might involve making investments in a variety of sectors, including industry, agriculture, and tourism. MENA countries can employ trading techniques to mitigate the impact of operational policy changes on their current account balance. For example, they can fix the price of upcoming oil imports using financial tools like options and futures contracts.

The economies of the MENA emerging countries that import oil ought to think about working together to bargain for more favourable conditions on oil purchases and lessen their overall vulnerability to changes in economic policy. By managing the asymmetric impact of operational fiscal policy variations on the pace of monetary

modification, emerging countries that import oil can improve economic stability with the aid of these policy implications.

6. Limitations and Future Research Avenues

Concerning the unequal impact of the oil price on the current account balances of developing nations that import oil. First, the findings only apply to rising economies that import oil; they do not apply to other economic situations or regions. Second, the study's dependability could have been compromised by the data's accessibility and caliber.

On the other hand, the correlational analysis of the study may not establish a causal link between the oil price (OP) and the current account balances, nor may it reveal the long-term impacts of the study. It's also possible that the study's comparatively straightforward modelling approach overestimated the complexity of the interactions among these nations' interest rates (IR), exchange rates (ER), and oil prices (OP).

The unequal impacts of operational policies on the current account balance (CAB) of rising MENA countries, all of which are net importers of goods, can be examined in several ways. One approach to consider is the impact of external variables like exchange rates (CR), monetary policy, and global economic situations on interest rates. To find out if the findings hold elsewhere, one option is to broaden the research's geographic focus.

To better capture the complexity of the relationships between the oil price (OP) and the current account balance (CAB), future research may include more sophisticated modelling techniques in addition to studies of indicators and other significant economic variables, such as panel data analysis. Lastly, research on the effects of energy transitions and renewable energy on interest rates (IR) and currency rates in developing nations that import oil may be worthwhile.

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