# Impact of Macroeconomic Variables on the Economic Growth in the Middle East Countries

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**Abstract:**

This study investigated the impact of macroeconomic variables on the economic growth in the Middle East countries. The objectives of the research were to determine the relationship among GDP, inflation, oil and gas prices as well as competition on the economic growth in the Middle East. The study spanned between 2015 and 2019.The time series data for the region was obtained from the World Bank while data on ROA, together with ROE, was mined on the OPIC report. The GDP, oil price, interest rate, inflation, and completion were collected from OPIC and International monetary fund (IMF) Middle East report. The research used a panel regression method to analyses the impact of macroeconomic variables on the economic growth of Middle East countries.

The results showed that the GDP, oil and gases prices, inflation as well as supply of money are the most significant macroeconomic variables of the growth of the economy. The government, together with authorities that regulate, is required to discover other resources apart from hydrocarbon to refresh its economy as well as engender cost-effective financial structure in view of the global low-carbon technology advancements and decarburization policies. The research has a useful, practical implication for the policymakers, regulators of the region. The government, together with authorities that regulate, is required to discover other resources apart from hydrocarbon to refresh its economy as well as engender cost-effective financial structure.

**Keywords:** Middle East; oil price; exchange rate; inflation; GDP.

**JEL Classification:** C32; E32; E51; E52; E58.

## Introduction

The economy of Middle East is very diverse with national economies varying from hydrocarbon exporting rentiers to centralized economies as well as free market financial prudence. The Middle East is well recognized for the production of oil, which efficiently influences the whole region via the affluence it produces and through uses of labor (Muhammad *et al.* 2019). Lately, most countries in the region have carried out efforts to diversify their economies. The Middle East economies encompass of Bahrain, Cyprus, Egypt, Iran, Iraq, Turkey, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, UAE, and Yemen.

The Middle East region shows a different macroeconomic set-up that reveals the irregular distribution of oil resources across the area. The four oil-exporting parts are Oman, Saudi Arabia, Iraq as well as Kuwait; more than 40% of their Gross domestic product (GDP) is grounded on political events and oil, which are heavily funded from the revenue of oil. In the other four countries exporting oil and others, Bahrain, Qatar and UAE, they share between 20 to 40%. In these states, events in non-oil, as well as non-governmental zones, are always connected to Oil as well to governmental activities (Mohammad *et al*. 2020). The chief basis of manufacturing value-added tries to take in chemicals, refineries, and other extractive industries, whereas other non-oil sectors, for instance, construction rely heavily on governmental contacts (Mehdi and Li 2020).

There has been progress in the Middle East during the past decade to strengthen macroeconomic stability as well as establish the required conditions for constant rapid growth. Most countries in the Middle East have made vigilant progress with structural reforms, comprising trade liberalization as well as privatization. Several economies, such as Jordan, Egypt, Pakistan, and Yemen, have implemented macroeconomic adjustment programs, enhanced by the utilization of resources from the international monetary fund and the World Bank (Matthias and Leonie 2020).

During the second half of the 19th century, there was an overall declaration in inflation till the national authority tightened policies regarding monetary as well as fiscal deficits were reigned in; most import prices across the world were subdued. Similarly, external current account deficits cut down in response to overall tightened management of demand and corrections in exchange rates (Ali *et al.* 2018). In maintaining the containment of external current account deficits, foreign debts remained largely unaffected for most of the economies in the area. Nonetheless, the growth and development of the real GDP remained generally weak, while the populace continued to develop briskly, and foreign direct investment inflows were below other regions. The Middle East region became a cornerstone of the world's energy architecture, particularly in the second half of the century (Mensi *et al.* 2019). At this time, this architecture is undergoing a structural transformation, promptly by two distinct forces, which are technological development and decarburization policies.

The taking on as well as quick entry into the Paris Agreement forces (Leila*et al.* 2020) marked the most important forward step in global efforts to address global warming issues (Basheer *et al.*2019). Initially, both developed and developing countries dedicated to acting for them to minimize global average temperature rise to $2^0C$ or below, as well to pursue efforts to extra limit this to $1.5^0C$ above pre-determined levels. This should support strong decarburization actions that are now being undertaken in several parts of the world, such as the United Kingdom (Aromar *et al.* 2019).

In the meantime, advancement in technology has essentially raised the cost-competitiveness of low carbon technologies like wind power and solar generation, electric vehicles as well as power storage (Benczúr *et al.*2018).This has begun to reshape the global energy system, mainly by providing a more significant role to the wind and solar in the generation of the power mix. By transforming world energy architecture, global decarburization policies technological encroachments might influence the vital global gas as well as oil-producing regions like the Middle East (Castro *et al.* 2020).

Shockingly, the energy literature grants no comprehensive analysis of the possible influence of the world energy advancement on the region. This article seeks to fulfill the gap by investigating if the Middle East oil-exporting states are equipped to prosper moments of decarburization. We will start by analyzing the macroeconomic set-up of the Middle East region, presenting the continuous overreliance of Middle East oil exporters on the oil rent (Cuhlova 2018, Kulmer and Seebauer 2019).

The political economy influences standing behind the lack of diversification of frugality in the Middle East nations are assessed through the analytical lens of the RST-Rentier state theory. By suggesting a scenario-based analysis, we then illustrate the possible impact of the world decarburization on the Middle East oil exporters (Taylor *et al.* 2018). Thus this allows us to depict the unsuitability of present oil exporters in the Middle East macroeconomic models together with global decarburization pathways reliable with Paris Agreement. Finally, Middle East countries that export oil is supposed to put in mind economic diversification as structural pathways to be followed to make sure their prospect economic as well as political stability even in the decarburizing biosphere (Grubler *et al.* 2018).

## 1. Research Hypothesis

▪ H1: There is a positive significant correlation between Growth domestic product rate and Middle East Economy;

▪ H2: There is a positive significant relationship between inflation and the Middle East economy;

▪ H3: There is a significant positive relationship between oil and gas prices and economy of the Middle East;

▪ H4: There is a significant positive relation between competition and economic growth.

## 2. Literature Review

### 2.1. The Macroeconomic Context of the Middle East Region

Macroeconomics refers to the economic field, which researches the behavior of the general economy. Macroeconomics focuses, among other things, together with massive price levels, population, and rate of inflation, the total output of the economy, employment or unemployment as well as frequency of exchange (Ivanova *et al.* 2019). Microeconomics forms the external environment that industries do not have control over; thus, they have to change for them to fit in it (Basheer *et al.*2019). There has been a rising financial as well as integration surplus influencing industries functioning in the both domestic and global arena. The financial market helps economic growth and development via pooling a vast and long term capital (Lamperti *et al.* 2019).

This is undertaken via the issuance of stocks together with shares to firms that requires capital for startup or to expand their running. The research of the economic cycles, fluctuations in the economy as well as prices over eras of 1-10 years institutes macroeconomics (Niamir 2019).

In the Middle East countries, several studies have been carried out concerning macroeconomics variables and their impacts on economic growth through varied contexts. Katzman (2019) explored the relationship between macroeconomics variables and financial performance of oil firms and established the differing degree of impact between the chosen macroeconomic variables as of private equity firms in their respective countries as measured by Return on the investments as well as returns (Ruiz-Estrada and Park 2018).

## 2.2. Macroeconomic Variables

Macroeconomic variables refer to the variables which control the entire economy (Charles *et al.* 2019). These variables comprise of huge population, interest rates, economic output, employment as well as unemployment, government budget inflation, productivity, GDP growth, and international trade balance (Basheer *et al.* 2019). Macroeconomic variables are simulated with total pointers, usually influencing the whole economic environment that the organization runs.

The macroeconomic variables that will be utilized in the investigation are money supply, inflation, GDP growth rate, rate of exchange and interest rate with ROA as a measure of the financial performance of present firms. The real exchange rate establishes the international competition of the country. This is the index of competence of local currency. There is an inverse relationship between competitiveness and this index (Gossel 2018). Gross domestic product is the macroeconomic variables that are typically applied when measuring the economic performance level. The positive impact of GDP growth enhances the arguments of the optimistic association between financial sector performance and growth (Ali *et al.* 2018).

## 2.3. Oil-Rich Countries

The term oil-rich countries may show either the percentage GDP encompassed of oil exports or Oil reserved by volume countries'. Oil reserve measures the abundance of Oil in a country, while the percentage of exportation of oil to GDP ratio denotes reliance on oil of the country (Grundler and Potrafke 2019).

The database of the firms of the petroleum exporting nations of the petroleum exporting countries, which is usually denoted as OPEC, lists 33 world nations that distribute Oil across the world based on their daily barrel exports (Nam *et al.* 2020). Countries like Libya and Syria lack enough information, and data for countries such as Russia is only available in OPEC from 1990 following the fall of the Soviet Union; thus, they were uninvolved from consideration. For the assessment of oil reliance in countries, it is common to reflect on countries whose oil exportation encompasses 10 percent or more of their current GDP (Hamdi and Hakimi 2019). Comprising such drives, other countries such as Vietnam and Chins were as well removed. The remaining countries were incorporated in the regression model in this article using data from the period of 2015 up to 2019.

## 2.4. Institutions

Hayat (2019) contends that organizations are the major source of disparities between countries in development, together with economic growth. Besides, "the hypothesis that disparities in economic structures, rather than chance, geography or culture, cause income disparities per capita, is convincingly accepted empirically" (Qureshi *et al.*2019). One good example is North and South Korea. South Korea, though maybe not democratic in the initial stages, respected personal property as a factor of production under capitalist organizations, facilitated investment, and, thus, had tremendous growth on the economy as well as development. Socialist institutions have had negligible economic growth and policies. After 1978, hasty growth in countries like China did not happen due to norms or geographical changes in China or the sudden discovery of what to do. Rapid economic development came as a result of the Communist Party's radical turn towards those who called for institutional changes (Qureshi *et al.* 2019).

Son*et al.* (2020) argue that the resource plays a crucial part in the worthiness of institutions in the growth of deviating skills across economies with huge resources because the growth and development performance differences among resource-rich countries are essentially because of the way institutional structure allocates resource rents. Yeboua (2019) indicates that in democratic as well as non-democratic countries, Oil has a contrary important on the corruption. Zakharov (2019) argue that the efficiency of democratic institutions depends on natural resource feeding corruption. Hence, talking about the duty of natural resources in the growth of economy without putting in mind the quality of institution in the model is difficult, if not impossible (Bjarnadottir *et al.* 2019).

One challenging task is the way to measure institutional quality jointly. Luckily, in recent years, many organizations which had a historical database which may be applied in the regression models compile more detailed data in this regard consistently. Two of them that are cited more by scholars are Freedom House (FH) as well as Polity IV (Kemp-Benedict 2018). Freedom house delivers data in two main categories for many countries from 1972: civil liberties as well as rights of political. Civil rights and political rights were measured on a scale of one to seven, with one, 1, reflecting the maximum point of independence, and seven indications the lowest. Nations with the mean total ratings for political right as well as civil right fall between 1.00 and 2.50 are assigned "free," "partly free" and those between 3.0 to 5.0, and "not free" while those between 5.50 and 7.00 (Mayer *et al.* 2019).

## 2.5. Exchange Markets

For a pure floating regime, the commercial exchange is similar to any other product market without central bank interventions, that the supply and demand of the product establishes the price. If the total demand of a nation for a foreign currency surpasses its general external exchange income the rate of exchange rises; hence there is depreciation in the local currency, on the other hand, the foreign currency will appreciate. In the genuine biosphere, although there is no currency that is free of invention by the central bank (Mayer *et al.* 2019).

Inflation, which is usually demand-side in developing countries and has large backgrounds in the extra money supply, is also central to the exchange market. Here, an 'independent firm' and bank institution plays a crucial part in stopping excess supply of money and consequent inflation. However, central banks aren't autonomous in many developed countries. Consequently, governments in those countries usually solve their financial plan deficit problems quickly through ordering their central bank to generate money either directly or increase its supply of money indirectly by other means.

Mercure *et al.* (2019) proposed that the profitability component should be defined by two alternative methods: asset benefit ratio, asset return (ROA) and equity profit ratio, equity return (ROE). Whereas ROA indicates the capacity of the bank to produce income from its assets, and ROE means the Return on its Equity to shareholders, which is equivalent to ROA times the determinants of profitability unique to the Bank. Two variables influence the productivity of banks; micro- and macro-variables. Micro variables like bank size, capitalization, liquidity, asset quality, capital ratios, and collateral protection are regulated. In contrast, macro variables like competition, interest rate, money supply, hydrocarbon prices, GDP, inflation, and exchange rate are viewed to be beyond the financial functional institutional control (Meyer and Ahlert 2019).

A number of literature studies exist evaluating the effect of internal variables and characteristics of banks on the profitability of the Middle East economy (Morales-Torres *et al.* 2019). To the best of the knowledge of the researcher, the literature contains a handful of studies on the impact of macroeconomic variables and provides no formal research measuring the impact of macroeconomic variables on the profitability of the Middle East. This study, therefore, focuses on understanding and evaluating the effect on the profitability of the Middle East economy of the variables described below (Pollitt and Mercure 2018).

## 2.6. Gross Domestic Product Growth Rate

The gross domestic product is known to reflect productivity as one of the most important macroeconomic elements. Solaun and Cerdá(2019) investigated the efficiency of 10 countries and revealed that GDP, together with other macroeconomic variables, had a positive effect on the ability of countries. Bachnera *et al.* (2020) analyzed the impact of macroeconomic and structural variables on the World Bank in Jordan and revealed that GDP has a positive impact on the performance of the economy. Flexible research conducted by Anna (2020) examined GDP's effect on Islamic banks' profitability around the globe and found that GDP positively affects profitability. Based on the findings of past studies and discrepancy in the opinion of scholars, the present study aims to investigate the effect of GDP growth rate on the profitability of Islamic banks, postulating according to hypothesis (Gao and Zhou 2018).

## 2.7. Inflation

The literature extensively addressed the importance of inflation, in particular its relationship with success by banks. Inflation affects not only the prices of companies but also has a significant effect on bank customers and financial capital (Gao *et al.* 2019). The higher inflation rate drives corporations to increase their product prices, as it makes it easier for corporations to avoid suffering a drop in output demand (Mensi *et al.* 2019).

The study conducted by Jun *et al.* (2019) revealed that the impact of inflation on the profitability of the bank was first described by Motunrayo and Nicholas (2020), who found that inflation is the most significant factor

in the profitability of banks. Studies conducted by Chen *et al.* (2018) found that inflation had a positive impact on the profitability of Islamic banks. However, Luo*et al.* (2018) denied any significant connection between the profitability and inflation of Islamic banks. Having regard to the results of previous studies and the difference of opinion of the academics, the present study aims to investigate the effects of hypothesized inflation on the profitability of Islamic banks (Mardani *et al.* 2019)

## 2.8. Oil Prices

Oil is a significant source of revenue for the countries of the Middle East and is considered to be the tipping point of development for countries in the Gulf Cooperation Council (GCC) (Sarkodie *et al.* 2019). Countries highly dependent on Oil and gas face additional economic growth challenges as oil and gas prices are expected to decline further by 70% since mid-2014 (Shahbaz *et al.* 2018). Brunei is no exception to this, as the fall in oil and gas prices would present economic growth challenges as 97 percent of its economy depends on oil and gas exports (Valadkhani *et al.* 2019). The declining economic growth would lead to less competitive markets, which can reduce profitability for the economy. Wang *et al.* (2018) examined the impact of oil prices on the efficiency of Middle East countries. They reported that oil price fluctuations have no direct influence on the ability of countries in the Middle East. The impact of oil price fluctuations on the profitability of the economy is determined by deploying according to the hypothesis.

## 2.9. Competition

Competition is defined as a vital determinant of the competitiveness of banks. The effect of a new entrant on productivity is difficult to explain or quantify, in keeping with the conventional approach. El-Chaarani (2019) revealed that the level of monopoly could influence competition; the higher level of monopoly shows greater profitability as it allows corporations to gain control over the regulation of prices and services. Motunrayo and Nicholas (2020) showed that while the banking sector is in a competitive environment, the arrival of new entrants would not affect the competitiveness of existing banks. The following theory analyzes competition's impact on profitability.

## 3. Methodology

To attain the purpose of this research the time series data from the year 2015 to 2019 was gathered from several sources. In this research, the World Bank is selected since it is the leading bank with several countries' data. The data on ROA, together with ROE, was mined on the OPIC report. The GDP, oil price, interest rate, inflation, and completion were collected from OPIC and International monetary fund (IMF) Middle East report.

The research used a panel regression method to analyses the impact of macroeconomic variables on the economic growth of Middle East countries. The panel data regression method has merit in offering descriptive data that has the capability to give cross-sectional data. Panel data explains the change in the individual differences over certain specific times that help to record b dynamic adjustment. Generally, the model of panel simultaneously assists in recognizing the variances in the outlook of a variable. A different justification for using panel regression model is that it gives a degree of freedom as well as efficiency that allow researching the impact of macroeconomic variables on the economic growth in the Middle East. This article adopted the effects of the Panel regression model as other methods and random effects; approximation needs a different cross-section to be larger than coefficients for between approximates for estimates of arbitrary impact invention.

### 3.1. Measurements of variables

Economic growth is the dependent variable in the research; it is measured by two distinct dummy variables of ROE and ROA.

### Return on Equity

Return on Equity indicates the return rate to the shareholders on every dollar of equity invested inthe oil industry. It is a technique to show economic growth. ROA is computed by dividing net profit after tax by total Equity, while total Equity is reverse plus total capital (Wang *et al.* 2018). Therefore, a higher ratio indicates better exploitations of the resources.

### Return on Equity

Return on Equity represents the volume of a corporate to achieve credits at reduced costs as well as produce enough gain via investments. The ratio measures the creation of net income of the economy on the upper assets.

A greater Return on assets ratio indicates a higher growth and profitability to the economy (Wang *et al*. 2018). ROA is applied globally as a dummy variable to measure the growth of the economy. Zhang*et al*. (2019) realized that the ROA ratio is an essential tool to represent the effectiveness running of the industries.

## Model Specification

To determine the impact of macroeconomic variables on the Middle East Economy following regression equation is embraced.

$$ROAin=\alpha+\beta1 (GDPin) + \beta2(INFit) + \beta3(IRit)+ \beta4 (ERit) + \beta5(OPit) + \beta6(CMPit) + \beta7(MSit) +\varepsilon \qquad (1)$$

$$ROEit= \alpha+ \beta1 (GDPin) + \beta2(INFit) + \beta3(IRit)+ \beta4 (ERit) + \beta5(OPit) + \beta6(CMPit) + \beta7(MSit) +\varepsilon \qquad (2)$$

*where*: ROE, as well as ROA in the above equation, indicates Return over assets as well return over Equity, in the equation indicates individual country while *t* indicates the year. MS, CMP, OP, ER, INF, GDP, and IR indicate the macroeconomic variables of money supply, competition, price of Oil, exchange rate, inflation, gross domestic product and interest rate and ε indicates error term.

## 4. Empirical Findings and Discussion

### 4.1. Statistical Findings

The statistical results of the variable used are shown in the table below:

Table 1. Comparison of macroeconomic variables in China across five years

| Variable | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| ROE (%) | 10.20 | 5.6 | 7.5 | 8.7 | 9.9 |
| ROA (%) | 2.20 | 1.4 | 1.5 | 1.8 | 1.5 |
| GDP(BND/year) | 59,535.5 | 55,733 | 52,748 | 42,684 | 37,257 |
| IR | 6.60 | 6.60 | 6.60 | 6.60 | 6.60 |
| INF (%) | +0.20 | +0.40 | -0.20 | +0.40 | +0.70 |
| MIS (BND) | 13.96b | 14.2b | 14.62b | 14.62b | 14.58b |
| CMP | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OP | 16.4b | 14.96b | 13.92b | 10.10b | 8.2b |
| ER(USD to 1BND) | 1.22 | 1.27 | 1.32 | 1.4 | 1.4 |

*Source:* IMF, OPIC, World Bank

The table above consists of the statistics for ROE, ROA as well as macroeconomic variables used in the research. The first and second rows of the table consist of statistics of ROE after taxes as well as ROA prior taxes. The growth of net profit was BND 98m in 2015 with a yearly rise of 35% as net profit, 25% as ROE, and 42.8% as ROA. Nevertheless, it substantially decreased in net profit, ROE, and ROA. It revived in the following year of 2017 and became BND 83.9m with 33.9% as return on Equity, 7.1% as Return on the asset, and 40.5 as net profits. The net profit proceeds rising in the 2018 and 2019 to BND 100 as well as BND 122.1m with yearly growth of 19.9% and 21.4%. ROA rose by 20% in 2018 and reduced 16.6% in 2019. ROE raised 16 percent as well as 12.6% in 2018 as well as 2019.

The third row shows the per capital rate GDP in the Middle East countries. The row shows that GDP rose 0.9% in the year 2015 as well reduced 6.3%, 5.3%, and 19.07% as well as 12.7% in the subsequent years of 2016, 2017, 2018, and 2019. The fifth-row shows depict the rate of inflation, which increased from 0.2% to 0.4% in the year of 2015 and 2013. Conversely, it reduced to 0.2% in 2017 and rose by 0.4% in 2018 as well proceeded to rise by 0.7% till the end of 2019.

From the table, it can be noted that interest rote across the countries was constant at 5.50% from the year 2015 up to 2019. The exchange rate in United States Dollars dropped in the year 2015 by 6.0%. Nevertheless, the exchange rate persisted in improving by 4.0%, 3.9% as well as 6.8% in the years 2016, 2017 and 2018 and finally reduced by 2.12 in 2019. The oil price row from the table measured ion million dollars; the price of the Oil rose by 0.02% in 2015, which considerably reduced by 9 percent in the following years of 2016, 2017, and 2018 by 6.8%, 27.35% as well as 18.1% respectively.

### 4.2. Panel Regression Analysis

The results from panel regression analysis contacted by Stata-15 are presented in the tables below. Panel regression analysis for Return on Asset (ROA) on selected variables

Table 2. Panel Regression analysis for Return on the asset on selected variables

| ROA depended on variables | | | | |
|---|---|---|---|---|
| Independent variables | Coefficient | S.E | t-test | Probability |
| GDP | 1.07844 | 1.0074 | 5..8424 | 0.0000*** |
| INF | 1.01560 | 1.1938 | 1.8240 | 0.0000*** |
| ER | 1.06030 | 1.0720 | 1.7476 | 0.0211*** |
| OP | 1.01510 | 1.0080 | 1.8527 | 0.0043*** |
| MS | 1.07430 | 1.0142 | 2.6652 | 0.0000*** |
| Impact of specification | | | | |
| Dummy variables | | | | |
| $R^2$ | 0.74451 | Mean dependent variable | 1.68000 | |
| Adjusted $R^2$ | 0.72550 | S.D. dependent variable | 0.32700 | |
| S.E of regression | 0.06255 | Akaike criteria | -2.22997 | |
| Total squared residual | 0.59442 | Schwaz criteria | -2.68928 | |
| Long likelihood | 149.22 | Hannam-Quinn criteria | -2.87700 | |
| F-statistics | 17.62960 | Durbin-Watson | 2.29910 | |

*Note:* *** indicates significance at 1%, ** at 5% and *10% correspondingly

Table 3. Panel Regression analysis for Return on the asset on selected variables

| ROA depended on variables | | | | |
|---|---|---|---|---|
| Independent variables | Coefficient | S.E | t-test | Probability |
| GDP | 5.1684 | 4.7974 | 5.8424 | 0.0000*** |
| INF | 5.9345 | 5.2834 | 1.8240 | 0.0000*** |
| ER | 5.0603 | 5.0720 | 1.7476 | 0.0211*** |
| OP | 5.0151 | 5.0080 | 1.8527 | 0.0043*** |
| MS | 5.0743 | 5.0142 | 2.6652 | 0.0000*** |
| Impact of specification | | | | |
| Dummy variables | | | | |
| $R^2$ | 0.80400 | Mean dependent variable | 8.3700 | |
| Adjusted $R^2$ | 0.79550 | S.D. dependent variable | 1.8660 | |
| S.E of regression | 0.26144 | Akaike criteria | -2.4357 | |
| Total squared residual | 0.59349 | Schwaz criteria | -5.5035 | |
| Long likelihood | 148.235 | Hannam-Quinn criteria | -5.8777 | |
| F statistics | 80.000 | Durbin-Watson | 5.2357 | |

*Note:* *** indicates significance at 1%, ** at 5% and *10% respectively

The results of the panel regression analysis presented in tables above show that R-square values are equal to 74.45% (7445), 80.40 percent (8040) which showed that the proposed model is the best fit to predict the growth since R-square values are higher than 60% (60) threshold values. Pearson correlation test was performed to identify the multicollinearity problem in the proposed model, as the interest rate (IR) and competition (CMP) variables were found to be constant and removed from further study. The final model measured the effect on the profitability of GDP growth rate, the supply of money, inflation, oil price, and foreign exchange rate. In both models, the F-statistics were found to be significant at 1% level, showing that all independent variables (GDP growth rate, inflation, exchange rate, oil prices, and money supply) were collectively influencing dependent variables.

The coefficient, as well as the *t* values of Gross domestic product (GDP) shown in the table, depicts that it is significant and affects the growth positively. It implies that oil may substantially promote growth rate and enhance to diversify the Middle East economy provided that it is profitable.

It as well verified that the initial hypothesis of this research was accepted. Turning to the inflation rate coefficient as well as t values, it showed that the rate of inflation has a significant positive effect on the growth of countries in the Middle East. It is concluded that the greater the level of inflation drives corporate industries to increase the price of products such as Oil and gas to reduce the impact of insufficient demand that can considerably minimize the sales, which eventually affects revenues. A low inflation rate offers flexibility to consumers and other users in purchasing goods as well as services at the lowest price. This result is always with Mahjabeena *et al.* (2020). This research has as well found that inflation affects economic growth positively. It verified the existence of a positive relation between inflation and the economy; hence the second hypothesis was accepted.

The results from the two tables of panel regression of exchange rate show that it is positively significant, signifying that a higher percentage of exchange can lead to the growth of the economy in the Middle East countries. These results are aligned with (Zhao *et al.* 2018). These researchers found that rate if an exchange is positively significant in determining economic growth. Thus, the hypothesis was accepted. The findings of the oil price presented in the tables above revealed that oil price has a significant positive impact on the growth of the economy. This concluded that the lower the price of Oil leads to the low growth of the economy in the countries. It is an alarming situation for majority of oil reliance countries since most Middle East countries rely on oil and gas as a source of revenue that contributes to more than sixty percent of the national economy (Zhang *et al.* 2019). Most countries rely on the resources of Oil and gas as a source of income, which is in dire requirement of transfer of other resources to minimize the shocks of the low price of oil and gases. The finding supports the acceptance of hypothesis 3 of the research (Mehdi and Li 2020).

The t value and coefficient of money supply depicted that it has a positive significant impact on the economic growth on the profitability ratio of ROE and ROA. It is submitted that relaxed policies and provisions of OPIC may enable Middle East countries to diversify and intensify its supply of oil and gas across the globe to increase deposits, which will lead to the growth of the economy. These results are consistent with Muhammad *et al.* (2019) a significant positive relationship depicted supply of money and profitability that hypothesis was accepted.

## Conclusion

This research has shed light on the determinants of macroeconomics, impacting the economic growth of the Middle East region from 2015 to 2019. The economic system of the region relies heavily on the revenue from oil and gas prices, which have dropped significantly, fin the phase. The secondary data of the macroeconomic variables, which comprise of prices of Oil and gas, money supply, rate of growth of GDP, completion, exchange rate, rate of inflation, was collected from IMF, World Bank, and OPIC annual reports. The fixed effects panel regression technique, which was adopted for data analysis using Stata version 15. Throughout the analysis of data, the variables of the interest rate as well as completion decreased as these were constant during the chosen research time. The final model concentrated on analyzing the impact of the remaining variables on the economy. The results showed that the GDP, oil and gases prices, inflation as well as supply of money are the most significant macroeconomic variables of the growth of the economy.

The research has a useful, practical implication for the policymakers, regulators of the region. The government, together with authorities that regulate, is required to discover other resources apart from hydrocarbon to refresh its economy as well as engender cost-effective financial structure. The managerial team dealing with oil industries is necessary to decline flexible as well as profitable pricing techniques during excessive inflation. The respective authorities, together with the government, can introduce surplus money so that the Economy of Middle East countries is capable to intensify credit as well enhance its profitability via investment.

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