Economic Determinants and Oil Shocks: Unravelling the Impact of Kuala Lumpur Composite Index (KLCI) Performance

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Abstract: The Kuala Lumpur Composite Index (KLCI) increase steadily from 1970 to 2023 despite major swings in important economic indicators such as inflation, exchange rates, GDP, and oil shocks. This divergence between economic issues and stock market performance emphasises the importance of delving deeper into the underlying causes. This study examines the impact of economic forces and oil shocks on KLCI performance using World Bank data from 1970 to 2023. The Auto Regression Distribution Lag (ARDL) model was used to determine how these variables influence stock market performance in the short and long run. Two findings are highlighted based on ARDL analysis. First, the short-run findings indicate that Oil Price, GDP, and Exchange Rate positively impact KLCI. However, inflation delivers a significant and negative impact on KLCI. Second, the long-run findings indicate that oil prices and GDP deliver significant and positive impacts towards KLCI. However, inflation and exchange rates have significant and negative impacts on KLCI. Those findings lead towards further discussion and policy recommendations in the later section, aligning with SDG 7 (Affordable and clean energy) and 8 (Decent Work and economic growth).

1 INTRODUCTION

Studies on stock market performance have consistently investigated the impact of various economic and non-economic factors that determine market results. These studies frequently concentrate on components such as value, momentum, and macroeconomic indicators, examining their impact on stock returns. Surprisingly, stock markets have exhibited resilience, occasionally exhibiting positive returns during economic downturns, highlighting their ability to survive economic adversities. In Malaysia, the Kuala Lumpur Stock Exchange, rebranded as Bursa Malaysia in 2004, is the principal trading platform. The Kuala Lumpur Composite Index (KLCI), a significant market performance indicator, reflects larger economic trends and provides useful insights into the market's overall health (Chia et al., 2020).

The KLCI's trading volume trend from 1970 to 2023 shows an overall upward tendency, with notable drops in individual years such as 1995, 2009, and 2021. These downturns were caused by both global and domestic economic shocks, with the ASEAN financial crisis of the late 1990s having a critical role (Boonman, 2023). In addition to these crises, oil price shocks had a substantial impact on KLCI performance, demonstrating the intricate link between global oil price changes and the Malaysian market. This highlights the need to take into account both macroeconomic forces and external influences, such as oil price swings, when analyzing KLCI patterns.

To fill this research gap, the study examines the impact of both economic forces and oil shocks on the short run and long run performance of the KLCI using World Bank data from 1970 to 2023. This paper has made some contributions. First is methodology contribution, an econometric analysis, especially an Auto Regressive Distributed Lag (ARDL) model, will be used to assess the correlations between these factors and KLCI performance. This model allows for the investigation of both short- and long-term impacts while accounting for any cointegration among the variables. The study's goal is to investigate how these parameters influence KLCI performance, both

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separately and in combination, by taking into account their interactions and correlations. Second, the study contributes new perspectives by concentrating on Malaysia's oil shocks and macroeconomic factors, which have received little attention in rising Southeast Asian economies (Nguyen & Pham, 2021; Umar et al., 2023). The third contribution incorporates SDG 8: Decent Work and Economic Growth and SDG 7: Affordable and Clean Energy. By examining the impact of oil shocks and macroeconomic factors, this research offers policy recommendations to promote sustainable economic growth and energy efficiency while fostering resilient financial systems that support inclusive economic opportunities in Malaysia.

2 LITERATURE REVIEW

2.1 Underpinning Theory

The Efficient Market Hypothesis (EMH), a well-known hypothesis in financial economics, asserts that financial markets are informationally efficient, which means that asset prices quickly reflect all available information (Fama, 1970). Because price fluctuations are mostly influenced by fresh information, which is erratic and unpredictable, EMH contends that it is practically impossible for investors to outperform the market regularly. This idea is essential to comprehend how the stock market behaves and how outside influences, such as macroeconomic variables and shocks connected to oil, affect market performance.

One of the primary principles of the EMH is the idea that markets are efficient, which contradicts conventional wisdom regarding investors' or fund managers' capacity to "beat the market" by using better strategy or analysis. Rather, the theory suggests that stock values fluctuate in a "random walk," meaning it is impossible to forecast future changes based on historical performance. According to EMH, the market quickly prices in variables like GDP growth, inflation, and oil price volatility, eliminating any opportunity for arbitrage or excess gains (Samuelson, 1965).

The EMH's critics argue that transaction costs, market anomalies, and behavioural biases contribute to inefficiencies that keep markets from operating optimally. For example, short-term asset mispricing may result from irrational investor behaviour, as shown during market booms or collapses (Gupta et al., 2025). This theory calls into question the fact that genuine intrinsic values are always reflected in markets. Furthermore, detractors point out that regulatory restrictions, reduced liquidity, and restricted information access may cause emerging markets like Malaysia to deviate from efficiency (Ahmad & Wu, 2022). The effect of outside shocks, such as changes in the price of oil, on market efficiency is another issue that the EMH framework calls into question. Critics point out that although the hypothesis posits that markets react to shocks fast, the precision and speed of this adjustment might vary based on the market's depth, maturity, and information availability (El Ghoul et al., 2022).

2.2 Empirical Review

Empirical research on the effects of oil shocks and macroeconomic variables on Malaysia's stock market reveals disparities between short- and long-term effects. Dutta et al. (2021) found that fluctuations in oil prices had a considerable impact on stock returns. The market reacts poorly during crises, such as the COVID-19 epidemic, but recovers as oil prices rise. Mokni (2020) also implies that demand-driven oil shocks tend to stabilize stock returns in the long run, whereas supply shocks often cause short-term volatility.

The impact of oil prices on the stock market is mixed. Aowa et al. (2023) found a negative long-term impact caused by growing expenses for oil-dependent enterprises. However, Siow et al. (2023) discovered that Malaysia, as a significant oil exporter, benefits from rising oil prices over time. Oil consumption is also important, as more consumption is associated with better stock performance. Alamgir and Amin (2021) claimed that higher oil usage boosts national GDP and investor confidence over time.

Inflation's effect on the stock market is more complex. While Kalam (2020) reported a beneficial influence on Malaysian stock indices, Sumaryoto et al. (2021) discovered no meaningful short-term impact. Inflation might reduce purchasing power in the short term, but it also indicates economic stability and growth. Meanwhile, GDP consistently correlates positively with stock performance, with Li et al. (2022) and Zulkifli et al. (2024) correlating economic expansion to increased consumer spending and market confidence. As Liu et al. (2023) point out, GDP contractions often result in negative stock returns. Finally, exchange rates have a variable impact on stock markets across time. While Dang et al. (2020) reported a long-term positive association with Malaysia's KLCI, short-term volatility frequently caused market instability.

3 METHODOLOGY

3.1 Data Collection and Source

The relationship between Malaysia's stock market performance, oil shocks, and key Macroeconomic indicators has been intensively studied. This research incorporates significant macroeconomic factors that influence Malaysia's stock market performance. The explained variable in this study is stock market performance. Annual data spanning from 1970 to 2023 was collected from publicly available online sources from the World Bank Development Indicators (WDI), as presented in Table 1. The data underwent a log transformation before conducting the Auto Regression Distribution Lag (ARDL) bound test. The data were log-transformed before the application of the ARDL bound test.

3.2 Model Specification

The study employed the auto Regressive Distributed Lag (ARDL) model initially developed by (Pesaran et al., 2001) to examine the long-term and short-term interactions among oil shocks, oil price, oil usage and key Macroeconomic factors affecting the Malaysian stock market performance. The methodology is particularly valuable for analysing connections among non-stationary time series data, including variables that exhibit trends or random fluctuations. The ARDL approach offers a significant advantage in managing models with mixed-order integration, accommodating variables that may exhibit varying orders of integrations. Some variables may be integrated into order one (I (1)), indicating the presence of a unit. Root and non-stationery are present, whereas others may exhibit zero (I (0)) integration, indicating stationery. Consequently, it is possible to examine relationships among variables using different statistical properties.

The ARDL approach allows researchers to estimate the long-term equilibrium relationships between variables while capturing short-term dynamics or adjustments towards equilibrium. This methodology facilitates the assessment of the impact or changes in one variable on another over time, even in the presence of non-stationary variables. This model was constructed to establish the relationship between the dependent and independent variables.

Where LnKLCI is the Stock market performance in period t, LnOILRENTS is the oil rents (% of GDP) in period t, OILPRI is the oil pump price in period t, OILUSG is the domestic oil usage in period t, IF is the inflation rate in period t, GDP is gross domestic product in period t, and lastly MYR is Malaysian ringgit exchange rate in period t. In addition, β_0 is a constant, β_1 to β_6 are the respective regression coefficients, ε_ denotes stochastic white noise, and t denotes the period (1970 to 2023).

3.3 Unit Root Test (Test for Stationarity)

Studies indicate that unit roots may result in erroneous conclusions in time series analysis (Granger & Newbold, 1974; Philips, 1987). The Augmented Dicky-Fuller (ADF) and Philips- Perron (PP) tests have been established to evaluate the stationarity of standard unit roots (Dicky & Fuller, 1979; Perron, 1990). Unit root tests are essential for assessing the integration order variables or series that are predominantly non-stationary. The specified model (Equation 3) assumes that the variables exhibit unit roots at the initial level. These variables can be converted into stationary via first differencing, represented as (I (1)). The ADF and PP tests can be utilised to assess the existence of a unit root in this scenario. The standard formulation of the ADF test is expressed in Equation 1:

$$\Delta Y_t = \mu + \beta_1 + (\theta - 1)\Delta Y_{t-1} + \sum \delta_i \Delta Y_{t-i} + \varepsilon_t \quad (1)$$

Table 1: Variable description and data source.

Variables	Descriptions	Measurement units	Source
KLCI	Malaysian stock market performance	Stock traded, total value (% of GDP)	WDI
OILRENTS	Oil shocks	Oil rents (% of GDP)	WDI
OILPRI	Oil price	Pump price for gasoline (US$ per litre)	WDI
OILUSG	Oil usage	Energy use (kg of oil equivalent per capita)	WDI
IF	Inflation	Inflation, consumer prices (annual %)	WDI
GDP	Gross Domestic Product	GDP growth (annual %)	WDI
MYR	Exchange Rate	Official exchange rate (LCU per US$, period average)	WDI

Exogeneity test was not judged necessary in this study because it used the Auto Regressive Distributed Lag (ARDL) model. The ARDL model is resistant to endogeneity problems, particularly when variables of order I(0) or I(1), as in the case of the selected independent variables. Furthermore, the factors chosen—such as oil price shocks, GDP, inflation, and currency rates—are predominantly impacted by broader macroeconomic dynamics and are unlikely to be considerably affected by KLCI performance, particularly in the short run. As a result, exogeneity problems are negligible in this setting, and rigorous testing was not necessary. However, if any endogeneity is discovered throughout the analysis, suitable corrective steps will be implemented.

3.4 ARDL Model

The variables identified by the ARDL bounds test exhibit a common stochastic trend and will increase proportionally over time. Engle and Granger (1987) propose that an error correction model (ECM) is warranted when a long-term relationship exists between the variables. The vector autoregression model (VAR) is generally favoured when the variables demonstrate a short-term relationship. In the context of cointegration, an ECM representation can be articulated through equations 3.

Where $KLCI_{t-1}$ represents the Malaysia stock market performance, ECM_{t-1} denotes the residual series from the long-run regression error correction term, ϑ is the parameter for the speed of adjustment, Δ is the difference operator, β_0 is the constant to β_7 represent the regression coefficients, n represents the optimal lag orders, and I represent the number of variables in the model, which could be from 1 to k. The dependent variable is a function of its lagged values $LnKLCI_{t-1}$, which becomes an exogenous variable among the legged values of the regressors in the model.

The ARDL form for the long-run relationship model in the context of cointegration is specified in equation (2):

The short-run model, estimated with ECM, is formulated as in equation (3) :

4 RESULTS AND DISCUSSIONS

4.1 Descriptive Results

Table 2 contains descriptive statistics on oil shocks, oil prices, oil usage, and major economic factors that influenced Malaysia's stock market performance from 1970 to 2023. The KLCI has a mean of 5.4018 and a standard deviation of 6.1850, indicating high market volatility caused by macroeconomic conditions, financial crises, and fluctuations in investor opinion.

Oil-related variables fluctuate at different rates. Oil shocks (OILRENTS) have a mean of 4.758 and a standard deviation of 3.087, suggesting Malaysia's vulnerability to geopolitical risks and global supply-demand imbalances. In contrast, oil prices (OILPRI) showed less variability (mean: 0.442, SD: 0.0851), indicating that global pricing systems have partially stabilized excessive volatility. However, given Malaysia's reliance on oil, even small price fluctuations can have an impact on the stock market.

Aside from oil, other economic indices show noticeable movements. Oil usage (OILUSG) has a mean of 2514.932 and a standard deviation of 777.841, indicating that it responds to industrial activity and economic cycles. Inflation (IF) is very variable (mean: 3.358, SD: 2.793), influenced by both domestic and global economic influences. Meanwhile, GDP growth has been reasonably consistent (mean: 6.617, SD: 2.657), demonstrating Malaysia's resilience in the face of global and local economic shifts. The currency rate (MYR), with a mean of 3.128 and a standard deviation of 0.693, shows moderate volatility, which is critical for investor confidence and trade competitiveness.

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$$\Delta LnKLCI_t = \beta_0 + \sum_{i=2}^{n} \beta_1 * \Delta LnKLCI_{t-1} + \sum_{i=1}^{n} \beta_2 * \Delta LnOILRENTS_{t-1} + \sum_{i=1}^{n} \beta_3 * \Delta LnOILPRI_{t-1} + \sum_{i=1}^{n} \beta_4 * \Delta LnOILUSG_{t-1} + \sum_{i=1}^{n} \beta_5 * \Delta LnIF_{t-1} + \sum_{i=1}^{n} \beta_6 * \Delta LnGDP_{t-1} + \sum_{i=1}^{n} \beta_7 * \Delta LnMYR_{t-1} + \varepsilon_t \quad (2)$$

$$\Delta LnKLCI_t = \beta_0 + \sum_{i=2}^{n} \beta_1 * \Delta LnKLCI_{t-1} + \sum_{i=1}^{n} \beta_2 * \Delta LnOILRENTS_{t-1} + \sum_{i=1}^{n} \beta_3 * \Delta LnOILPRI_{t-1} + \sum_{i=1}^{n} \beta_4 * \Delta LnOILUSG_{t-1} + \sum_{i=1}^{n} \beta_5 * \Delta LnIF_{t-1} + \sum_{i=1}^{n} \beta_6 * \Delta LnGDP_{t-1} + \sum_{i=1}^{n} \beta_7 * \Delta LnMYR_{t-1} + \varepsilon_t + \vartheta ECM_{t-1} + \varepsilon_t \quad (3)$$

Table 2: Descriptive Statistics.

Variables	Observ	Mean	St. Dev	Minimum	Maximum
Stock market performance (KLCI)	54	5.402	6.185	1.172	2.491
Oil shocks (OILRENTS)	54	4.758	3.087	0.017	13.334
Oil price (OILPRI)	54	0.442	0.085	0.280	0.680
Oil usage (OILUSG)	54	2514.932	777.841	1029.126	3500.000
Inflation (IF)	54	3.358	2.793	0.290	17.3289
Gross domestic product (GDP)	54	6.6172	2.6574	0.5177	11.7011
Exchange rate (MYR)	54	3.1284	0.6928	2.1769	4.4011

Note: The results are taken before using an algorithm. KLCI, OILRENTS, OILPRI, OILUSG, IF, GDP and MYR represent Stock Market Performance, Oil shocks, Oil Prices, Oil Usage, Inflation, Gross domestic product and Exchange Rate.

Table 3: Unit root test via Augmented Dicky-fuller (ADF) and Philips-Perron (PP).

	ADF		Phillips-Perron			
	T-STAT		At level		First difference	
Variables	At level	First difference	Z(p)	Z(t)	Z(p)	Z(t)
KLCI	-2.12	-11.48***	0.08*	-3.29	0.0000***	-11.48
OILRENTS	-6.53	-4.66***	0.00***	-7.69	0.0001***	-5.66
OILPRI	-2.59	-4.50***	0.65	-1.88	0.0355**	-3.65
OILUSG	-1.48	-6.28***	0.93	-1.06	0.0000***	-10.65
IF	-4.51	-9.23***	0.003***	-4.51	0.0000***	-10.23
GDP	-6.34	-11.02***	0.00***	-6.33	0.0001***	-37.44
MYR	-3.62	-5.59***	0.15	-2.95	0.0002***	-5.48

consistent (mean: 6.617, SD: 2.657), demonstrating Malaysia's resilience in the face of global and local economic shifts. The currency rate (MYR), with a mean of 3.128 and a standard deviation of 0.693, shows moderate volatility, which is critical for investor confidence and trade competitiveness.

4.2 Unit Root Test Results (Test for Stationery)

Before implementing the ARDL test, confirm that each variable's unit root is stationary at I(0), I(1), or both for the bound F-statistical test. The integration order of the variables was determined using the augmented Dicky-Fuller (ADF) and Philips-Perron (PP) unit root tests (Dicky & Fuller, 1979; Perron, 1990), and the results were compared to Mackinnon's (1996) critical values. The null hypothesis implies the existence of a unit root, and a test statistic less than the critical value demonstrates stationarity. As shown in Table 3, the ADF and PP tests show that all variables (KLCI, OILRENTS, OILPRI, OILUSG, IF, GDP, and MYR) are stationary at I(1) with a 0.05 significant level. This implies that there is no unit root, showing that the variables follow a stable or predictable pattern, and that they have the same order of stationarity, implying a possible long-run link.

4.3 Short Run Estimation

Engle & Granger (1987) assert that an Error Correction Model (ECM) should be developed when a long-run relationship exists between variables. As a result, ECM was created to estimate the error term. The estimated coefficient of ARDL-ECM indicates the existence of cointegration among variables and exhibits a positive sign. It means the adjustment rate to long-run equilibrium after experiencing short-run disturbances. The estimated ECM coefficient in this study is - 0.02, which is statistically significant at the 5% level. This finding indicates that any divergence from short-run equilibrium among variables and Stock Market performance can be corrected and reinstated annually at 0.02% in the long run, as demonstrated in Table 4. Following the verification of long and short-run associations between variables through the ARDL test, the study identifies the parameters for these variables in both time frames.

The short-run ARDL model finds numerous significant drivers of Malaysia's stock market performance (DLnKLCI). Oil price (DLnOILPRI), lagged by one and two periods, has a substantial negative impact on KLCI, with a coefficient of 3.6202 (p = 0.0380), showing that higher oil prices in the past have harmed stock market performance. Lagged inflation (DLnIF) spanning four periods likewise demonstrates a negative association, with a coefficient of -0.1940 (p = 0.0323), implying that higher historical inflation damages the market by

Table 4: Estimated Short-run coefficient from ARDL (54 observations from 1970 to 2023).

DLnKLCI	Coefficient	Std. Error	T-statistics	Prob	Results	Impact
DLnOILRENTS	0.0211	0.1286	0.1641	0.8707	Not significant	-
DLnOILPRI (-1) (-2)	3.6202	1.6706	-2.1669	0.0380	Significant	Positive
DLnOILUSG	-0.2729	0.5380	-0.5072	0.6155	Not significant	-
DLnIF (-1) (-2)(-3)(-4)	- 0.1940	0.08657	-2.2415	0.0323	Significant	Negative
DLnGDP (-1) (-2)	0.2370	0.1168	2.0288	0.0511	Significant	Positive
DLnMYR (-1)	2.1621	0.8074	2.6778	0.0117	Significant	Positive
ECM	-0.0174	0.0029	-5.9214	0.0000	Significant	Positive

*P>|z| values are based on a 5% significant level. The dependent variable is Malaysia's stock market performance (KLCI). ARDL (3,0,4,2,1,2,0) was selected using Akaike information criteria (Source: Author's Estimation).

Table 5: Estimated Long-run coefficient from ARDL (54 observations from 1970 to 2023).

LnKLCI	Coefficient	Std. Error	T-statistics	Prob	Results	Impact
LnOILRENTS	0.0211	0.1285	0.1641	0.8707	Not significant	-
LnOILPRI	2.3587	1.0323	2.2848	0.0293	Significant	Positive
LnOILUSG	-0.2729	0.5380	-0.5073	0.6155	Not significant	-
LnIF	-0.2966	0.1195	-2.4823	0.0187	Significant	Negative
LnGDP	0.2580	0.1094	2.3589	0.0248	Significant	Positive
LnMYR	-2.5028	0.8905	-2.8104	0.0085	Significant	Negative

*P>|z| values are based on a 5% significant level. The dependent variable is Malaysia's stock market performance (KLCI). ARDL (3,0,4,2,1,2,0) selected by Akaike information criteria (Source: Author's Estimation)

reducing consumer spending and purchasing power. Gross Domestic Product (DLnGDP), which is lagged by one or two periods, has a positive correlation with stock market performance, with a coefficient of 0.2370 (p = 0.0511), demonstrating that economic expansion stimulates the market. The exchange rate (DLnMYR) also has a positive effect, with a coefficient of 2.1621 (p = 0.0117), implying that a stronger Malaysian Ringgit boosts stock market performance. The ECM coefficient of -0.0174 (p = 0.0000) indicates that short-term deviations from long-run equilibrium are rectified at a rate of 1.74% each cycle.

In contrast, oil shocks (OILRENTS) and oil consumption (DLnOILSUG) had no significant impact on KLCI performance, with coefficients of 0.0211 (p = 0.8707) and -0.2729 (p = 0.6155), respectively, indicating that changes in oil prices or usage do not instantly affect Malaysia's stock market.

4.4 Long Run Estimation

The long-run ARDL estimation results based on Table 5 indicate several significant relationships between all variables and Malaysia's stock market performance from 1970 to 2023. Oil price (LnOILPRI) exhibits a significant positive effect on LnKLCI, indicated by the coefficient of 2.3587 (p = 0.0293). A 1% increase in LnOILPRI results in a 2.36% increase in LnKLCI, highlighting the oil price's significance in influencing the Malaysian stock market performance. Inflation (LnIF) significantly and negatively impacts LnKLCI, indicated by a coefficient of -0.2966 (p = 0.0187). Gross Domestic Product (LnGDP) exhibit a significant and positive correlation with LnKLCI, evidenced by a coefficient of 0.2580 (p = 0.0248), suggesting an increase in gross domestic product results in a 0.26% increase in Malaysia stock market performance. The exchange rate (LnMYR) exhibits a significant and negative impact on LnKLCI, indicated by the coefficient of -2.5028 (p = 0.0085), suggesting that a 1% depreciation in the Malaysian Ringgit (LnMYR) leads to a 2.50% decline in the Malaysia stock market performance. This finding underscores the sensitivity of the stock market to currency fluctuations, where a weaker exchange rate negatively impacts investor confidence and stock market valuations.

Conversely, various variables exhibit no significant long-term effect on LnKLCI. The oil shocks (LnOILRENTS) with a coefficient of 0.0211 (p = 0.8707) do not significantly influence the Malaysia stock market performance, indicating that fluctuations in the oil shocks do not impact LnKLCI over a long time. Likewise, Oil Usage (LnOILUSG), exhibiting a coefficient of -0.2729 (p = 0.6155), indicates no significant relationship, implying that oil usage does not directly affect Malaysia's stock market performance.

4.5 Residual Diagnostics Check

Table 6 represents the residual diagnostics check pertinent to the residual analysis of the ARDL model. The model produced an R-square of 0.973297, signifying a strong fit, as it accounts for approximately 97.3% of the variability of the Malaysian stock market performance (KLCI). The adjusted R-Square values of 0.9578 indicated a robust fit, considering the number of predictors in the model, and demonstrated that approximately 95.8% of the variations are explained post-adjustment. The Durbin-Watson of 2.1869 indicates an absence of significant autocorrelations in the residuals, as it is approximately the ideal value of 2, signifying that the errors are not serially correlated.

Table 6: Diagnostic Tests.

R- Square	0.9733
Adjusted R-Square	0.9578
Durbin-Watson statistics	2.1869

5 CONCLUSION

The study aims to provide insights into how oil shocks, oil price fluctuations, oil usage, and key macroeconomic variables influence Malaysia's stock market performance in the short and long run and their broader implications for economic stability and policy formulation. Data for this analysis were gathered from reliable sources, including the World Bank and the Central Bank of Malaysia, from 1970 to 2023. The study employs the Auto Regression Distributed Lag (ARDL) approach to investigate the dynamic relationships and causality between these variables and stock market performance, offering valuable findings for policymakers and investors.

Two findings are highlighted based on ARDL analysis. First, the short-run findings indicate that Oil Price, GDP, and Exchange Rate positively impact KLCI. However, inflation delivers a significant and negative impact on KLCI. Second, the long-run findings indicate that oil prices and GDP deliver significant and positive impacts towards KLCI. However, inflation and exchange rates have significant and negative impacts on KLCI. Those findings lead towards further discussion and policy recommendations in the later section.

5.1 Policy Recommendation

The findings of this study present crucial policy recommendations for improving Malaysia's stock market stability in line with SDG 8, which focuses on promoting economic growth and decent work. In the medium term, stabilizing oil prices and lowering reliance on fossil fuels are crucial for mitigating the negative consequences of price volatility. Malaysia should focus on energy diversification by investing in renewable energy sources including solar, wind, and hydropower. This will help to achieve SDG 7 (Affordable and Clean Energy) while also protecting the economy from cyclical changes in oil prices. The government may encourage energy sector innovation, provide incentives for green technologies, and drive private sector involvement in sustainable energy, all of which would improve the economy's long-term resilience.

To lessen dependency on global oil price volatility, Malaysia must prioritize economic diversification beyond the oil and gas industry in the long run. Promoting GDP development through investments in high-value areas like technology, digital innovation, and green industries will help to stabilize the stock market and promote SDG 8's aims of inclusive and sustainable industrialisation. Furthermore, fostering a business-friendly climate for new industries, as well as investing in education and skill development in the green economy, can help Malaysia create jobs and maintain its global competitiveness. Regional and global collaborations are particularly important because they can supply the resources, knowledge, and money required to transition to a sustainable economy, which benefits both SDGs 7 and 8.

5.2 Limitations and Future Research Directions

Based on the result, this study has weaknesses whereby two variables that do not have short-run and long-run effects are oil shocks and oil usage. Hence, future research directions are to revise the formula to calculate oil shocks and usage or use a new proxy for the variable. In addition, scholars can also test other variables available in world development indicators that may impact the Malaysian stock market performance, such as foreign direct investment, export and import, etc., because they are believed to be another factor affecting the Malaysian stock market. One of the limitations of ARDL is that it only analyses one-way directions. Hence, it is recommended that future research test analysis using

NARDL, which can provide two-way directions, or QARDL, which is based on quantile regression ARDL. Those analyses might deliver more robust and reliable results in the future.

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