An Empirical Study of Malaysia Palm Oil in the Global Market

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Abstract

This study is to review the factors that affect the Malaysian palm oil exports in the global market. This study used secondary data for the period 1975 until 2023 by using an ARDL approach. The findings of this study show that the dominant factor for Malaysia's palm oil export market in the long term is contributed by world economic activity. The world palm oil price has a negative impact and significant in the short run and the long run towards export. Next, this study also indicate that soya bean oil and palm oil are substitute but significant only in the long run. The positive effect also shown by exchange rate. Malaysia and Indonesia act as substitute in the global market which is indicated by a negative sign of Indonesian palm oil export but insignificant in the long run. However, in the short term it is significant at a one-year and two-year delay at the 1 percent significance level. Therefore, adopting a non-price approach, such as promotions and Memorandums of Understanding, are likely to stabilize and lower palm oil prices, thereby enhancing the marketability of Malaysia's palm oil exports worldwide.

Keywords: ARDL; Export; Global market; Palm oil

1. Introduction

Oil palm and Malaysia are interrelated. Palm oil is a plant that originates from West Africa. Palm oil began to gain a foothold in Malaysia when it first grown commercially in Malaysia in 1917 at Tennamaran Estate, Selangor. The farm is owned by M. H. Fauconnier, a friend of M. Hallet. This initial effort pioneered the rapid development of oil palm cultivation in Malaysia. The cultivation of oil palm increased dramatically in the early 1960s under the government's agricultural diversification program to reduce the country's economic dependence on rubber and tin, especially rubber which experienced a decline in prices due to competition from artificial rubber. In addition, the government also introduced a settlement land scheme for oil palm cultivation that aims to reduce poverty for those who do not own land and smallholders. The Federal Land Development Authority (FELDA) was introduced in 1961 with an area of 375 hectares to help farmers who do not own land. Oil palm plantations in Malaysia are based on the estate management system and smallholder schemes. The significant development and improvement in palm oil made Malaysia the main producer in 1966, taking over the role of Nigeria. While in 1969 Malaysia emerged as the world's largest exporter of palm oil and as the world's largest producer in 1973. Indonesia emerged as one of the main producers in the 1980s. However, in 2006, Indonesia became the world's leading producer of palm oil, while Malaysia ranked second. Meanwhile, in 2009 Indonesia began to surpass Malaysia as the world's main exporter of palm oil.

Palm oil remains the dominant vegetable oil in the global export market, significantly outperforming soybean oil. In 2023, palm oil exports reached 51.24 million tonnes, compared to 11.4 million tonnes for soybean oil. Malaysia's key export destinations traditionally include

Republic of China, the European Union, India and Pakistan. To further strengthen its market presence, Malaysia has expanded into Central Asia. In 2024, the country is set to export 54,665 tonnes of palm oil and palm-based products to the region, valued at RM288.23 million. The primary target countries are Uzbekistan, Kazakhstan, Tajikistan, Kyrgyzstan, and Turkmenistan (Bernama, 2025).

In macroeconomic analysis, export is one of the determinants of growth or achievement in economy (gross domestic product) for a country alongside consumption, investment, government spending and imports (Froyen, 2013). Exports are defined as goods produced domestically and sold to buyers in foreign countries. In addition, in terms of demand, exports are also referred to as export demand or foreign demand (Shamsudin et al., 1988; Abdullah et al., 1993). There are several studies done regarding of palm oil which is supply, demand, export and import as well as price.

According the previous study of palm oil exports, palm oil prices and export quantities are negatively related. The relationship is significant by Senteri (1978; 1988); Abdullah et al., (1993); Arshad et al. (1993); Talib and Darawi, (2002); Ernawati et al., (2006); Subramaniam et al., (2007); Yulismi and Siregar (2008); and Huda and Widodo (2017). A study by Hameed et al., (2016) also obtained similar findings for six Asian countries. While a study by Abdullah (2011) found that the export price is significant in the export demand for palm oil. However, Yusoff (1988) suggested that export demand and oil palm prices were not significant with an elasticity value of 0.4156. Ahmad et al. (2022) demonstrated a negative relationship between the price and export of palm oil, with a significant elasticity value of -7.075. Similarly, Lugo-Arias et al., (2024) indicated that factors such as declining palm and vegetable oil prices, currency devaluation, and rising soybean oil and biodiesel prices could enhance the marketability of palm oil exports.

The availability and high production yields make palm oil easy to obtain and a high level of availability compared to other vegetable oils in the market. Palm oil and soya bean oil are found to be the main competitors and substitutes. This result was discovered by Yusoff (1988); Abdullah et al. (1993) and Talib and Darawi (2002). Shamsudin et al. (1994) found that soya bean oil was only significant in the United Kingdom (UK), peanut oil was significant in India, the Netherlands, other European Economic Community (EEC) and Rest of the World (ROW) countries and cottonseed oil was significant in the United State of America (USA), Netherlands and ROW. Ernawati et al. (2006) stated that the price of soybean oil and Indonesia's palm oil exports are significant in India, China, and the rest of the world (ROW), with elasticity values of 2.74, 1.47, and 1.69, respectively.

While mustard oil is significant in the European market with an elasticity value of 0.43. Shariff et al., (2006) using an error correction model (ECM) method for Malaysian palm oil export found that that the price of soya bean oil is an important variable in India, Pakistan, Egypt and South Korea except China. Ahmad et al. (2022) also found soya bean oil to be very significant and positive in the China market with an elasticity value of 4.967.

Talib et al., (2007) found that the exports of processed palm oil are affected by the world price of soybeans (PSB) with a short-term elasticity of 0.061. Awad and Arshad (2008) also found that soybeans are a substitute for palm oil for the United States (USA), Canada and Mexico markets. Policy implications from this study also explain that to increase market share, pricing policy plays a very important role. Hameed et al., (2016) also obtained similar results for the market in India, China, Japan, Bangladesh, Korea and Pakistan. The same result found in Wong and Ahmad (2017); Ali (2019); Ismail et al., (2022) and Ahmad et al. (2022). One of the factors that affect exports is the population of a country. For the palm oil export market,

population and exports are positively related (Abdullah et al., 1993; Talib and Darawi, 2002). Ali (2019) also found that population is a significant factor in the Indian market in both the short and long term.

The exchange rate is an indicator of a country's export competitiveness and it is one of the factors associated with exports (Froyen, 2013). In a study of the oil palm industry, Talib and Darawi (2002) found that exports were significantly and positively affected by the exchange rate. Ahmad et al. (2022) also found that the exchange rate is a significant factor in the export market in China. Meanwhile, Ernawati et al. (2006) examined the impact of decreasing export taxes and import tariffs on the demand for Indonesian palm oil exports in India, China, the EU, and the rest of the world (ROW). Using an error correction model (ECM), the results show that the exchange rate has a positive effect, it is not significant in the Indian market. While, the variable is significant and negative with an elasticity value of -0.59 in China. Negative and significant findings were also obtained by Huda and Widodo (2017). While, study by Ismail et al., (2022) explain that exchange rate and Malaysian export of palm oil is not significant in China, India, Netherland, Pakistan and United State.

Palm oil is extensive and diverse in consumption, both in food and non-food (industry). Thus, world economic activity can generate palm oil exports in the global market. Based on studies by Mohammed and Mohamad (1987) and Yusoff (1988) the palm oil export demand and an economic activity of importer's countries are positive and significant which is proxied by variable Industrial Production Index (IPI). Ernawati et al. (2006) similarly observed that Indonesia's palm oil exports exhibited elasticities of 2.69, 0.24, and 1.69 in the Indian, Chinese, and ROW markets, respectively. Additionally, Wong and Ahmad (2017) highlighted that both the export price of palm oil and GDP play a significant role in influencing Malaysia's palm oil exports in the short run. Ahmad et al. (2022) also found that economic activity in China, which is proxied by per capita GDP, stimulates the importer of palm oil by that country. The significance level is reached at 1 percent with the coefficient value was 0.819.

While, in the aspect of competition between exporting countries of palm oil. Tri Suherman et al., (2013) found that Malaysia and Indonesia compete as exporter in Italy market. Zakaria et al., (2018) was used constant Market Share (CMS) shows that the performance of Malaysia surpasses Indonesia in terms of market and distribution of palm oil in the Balkans. Ali (2019) suggested that there is competition between Malaysia and Indonesia in the Indian market. Ahmad et al. (2022) found that the export performance of Malaysian palm oil in the Chinese market was not influenced by Indonesia. This is because the export price of Indonesian palm oil was not significant in this study. Notably, Malaysia and Indonesia continue to be the world's leading producers and exporters of palm oil.

Malaysia's oil palm industry has reached 10 decades since it was introduced in the 1960s as an action to eradicate rural poverty. Palm oil is a key agricultural commodity in Malaysia, contributing more significantly to export revenue and employment opportunities than rubber and cocoa. The positive development of this commodity has encouraged intervention of government to improve in terms of cultivation, management and diversity of downstream products and market expansion. In these 10 decades, the cultivated area has increased from 50 thousand hectares to 5.8 million hectares which includes Peninsular Malaysia, Sabah and Sarawak. Palm oil production has increased significantly from 1 million tonnes to 18.5 million tonnes between the 1920s and 2024. Similarly, exports have risen from approximately 1 million tonnes in 1970 to around 15 million tonnes in 2024 (MPOB, 2024). Malaysia's palm oil exports cover more than 150 countries around the world. In fact, almost 80 percent of

Malaysia's palm oil exports are concentrated in that country (Othman et al., 2023). Even so, the value of exports fluctuates due to changes in the world demand and economic situation.

The biggest challenge experienced by the Malaysian palm industry is the Covid 19 Pandemic. In the period from 2020 to 2023, especially palm oil export income experienced significant fluctuations. In 2020, palm oil exports reached RM45.65 million compared to RM39.13 million in 2019. This is due to the impact of the higher price of in the global market. The highest export value was recorded in 2022 (RM82.49 million) before declining to RM62.5 million in 2023. The export quantity also declined from 15.71 million tonnes to 15.13 million tonnes. Nowadays, Malaysia's palm oil is spread all over the world which will reach about 15 million tonnes in 2024 (MPOB, 2024). Although, currently Malaysia's exports are ranked second in the world market but the performance is increasing from the prior year.

This gives motivation to study the factors that generate that situation. Therefore, according to the phenomenon, it gave researchers the impetus to review the factors that have an impact towards Malaysian palm oil exports in the world market. This study will use secondary data for the period 1975 until 2023. The expectation that can be generated from this study is as a resource for public and private authorities related to the palm industry, especially the export market. This is because of the challenge of the anti-palm oil campaign in western countries, especially the United States (USA) and the European Union (EU) as well as environmental problems toward palm oil.

2. Methodology and Data Collection

Data Source

This study utilizes annual historical data for the period 1975 to 2023. Data on Malaysian palm oil exports, as well as global palm and soybean oil prices, are sourced from reports, statistical books, and the website of the Malaysian Palm Oil Board (MPOB) under the Malaysian Ministry of Plantations and Commodities (MPIC), across multiple years and editions. Additional data and information are obtained from the Directorate General of Plantations under the Indonesian Department of Agriculture, the Indonesian Palm Oil Research Center, and the websites of Oil World, IndexMundi, Statista, and the World Bank.

Model Specification

This study applied the maximization theory of the firm which is linked to the demand function (Henderson and Quandt, 1980). The formation equation of export demand on palm oil for this study is guided by Shamsudin et al., 1988 and Arshad et al. (1993). Then by using double log linear, the export demand function is expressed as (Equation 1):

LXDPOMt = f (LWCPOPt, LWPSBt , LWIPIt, LEXRMt, LIEXt)

Where
LXDPOMt = Malaysia Palm oil export (million tonnes)
LWCPOPt = World palm oil price (US$/tonnes)
LWPSBt = World soyabean oil price (US$/tonnes)

LWIPIt = World Industrial production Indexes (2010=100)
LEXRMt = Malaysia exchange rate (US$/RM)
LIEXt = Indonesia palm oil export (million tonnes)

The annual time series are applied in this analysis spans the years 1975–2023. The prevalence of time series data is analyzed using ordinary least square (OLS). However, in many cases of series data will involve unit root problems which cause spurious regressions. Thus, to overcome that problem, this study used the ARDL method in analyzing the data. The ARDL method developed by Pesaran et al. (1996; 2001) is applied to determine the cointegration features of the estimated equation. ARDL is used in this study because of its advantages. First, it ignores the level of the variable used as either I(0) or I(1), combinations of I(0) and I (1) as well as unknown order of integration (Egwuma et al., 2016). Second, it can be used for small data observations. Thirdly, it circumvents the greater number of requirements outlined in conventional cointegration testing. Unlike typical cointegration tests, the ARDL technique allows for the possibility of having various variables with varying optimal lags. Consequently, this model can be modified to fit small sample sizes. An estimated equation of ARDL for this study is derived as follow (Equation 2):

$$\Delta LXDPOM_t = \alpha_O + \sum_{h=1}^{k} \beta_{1h}\, \Delta LWCPOP_{t-h} + \sum_{i=1}^{l} \beta_{2i}\, \Delta LWPSB_{t-i} + \sum_{j=1}^{m} \beta_{3j}\, \Delta LWIPI_{t-j} + \sum_{k=1}^{n} \beta_{4k}\, \Delta LEXR_{t-k} + \sum_{l=1}^{o} \beta_{5l}\, \Delta LIEX_{t-l} + \gamma_1 LXDPOM_{t-1} + \gamma_2 LWCPOP_{t-1} + \gamma_3 LWPSB_{t-1} + \gamma_4 LWIPI_{t-1} + \gamma_5 LEXR_{t-1} + \gamma_6 LIEX_{t-1} + \varepsilon_t$$

Where;
α, β and γ = estimated parameter
LXDPOMt = Malaysia Palm oil export (million tonnes)
LWCPOPt = World palm oil price (US$/tonnes)
LWPSBt = World soyabean oil price (US$/tonnes)
LWIPIt = World Industrial production Indexes (2010=100)
LEXRMt = Malaysia exchange rate (US$/RM)
LIEXt = Indonesia palm oil export (million tonnes)
εt = Error term

3. Results

Based on Equation 2, through the ARDL approach bound tests for cointegration are estimated. It is calculated by comparing the F-statistic and the critical value of F. This situation is tabulated in Table 1. The F statistic value is 7.2049 which is exceeds the critical value of the upper boundary at 1 percent significant level. According to hypothesis testing guidelines, if the calculated test statistic exceeds the critical value, the null hypothesis of no cointegration among LXDPOM, LWCPOP, LWPSB, LWIPI, LEXRM, and LIEX is rejected. Next, this study also does not exist serial correlation problem. This situation was calculated by using the LM Breusch-Godfrey (BG) test. The results, presented in Table 2, show a chi-square value of 0.1642

with a probability of 0.4909—well above the 0.05 threshold of the LM test—reinforcing the model's reliability at a 95% confidence level.

Table 1: ARDL bound test of cointegration

	Significance	Lower bound (I0)	Upper bound (I1)
F - statistics	1%	3.41	4.68
7.204885	2.5%	2.96	4.18
	5%	2.62	3.79
	10%	2.26	3.35

Table 2: Breusch-Godfrey serial correlation LM test

Test	Statistics (F)	Obs*R-squared	Probability	Prob. Chi-Square (2)
Breusch-Godfrey (BG) LM	0.742197	3.613739	0.4909	0.1642

In addition, the Jarque-Bera normality test was used to confirm that this regression is unbiased and stable which is 1.0382 at a probability value of 0.595. This probability value exceeds 5 percent as a rule of thumb significance level explains that residuals are normally distributed. This finding represented by Figure 1.

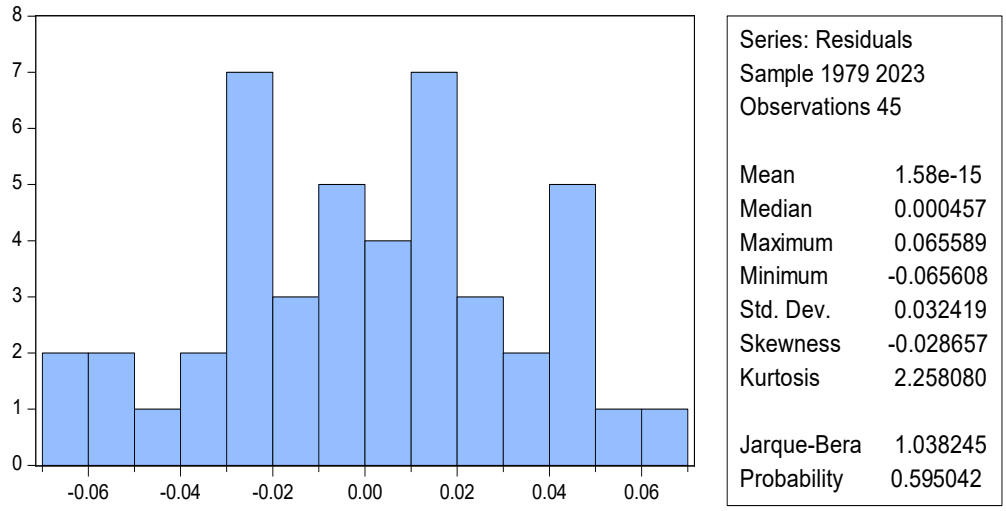

Figure 1: Jarque-Bera normality test

Long run Estimation

The findings of the study in the long run are shown in Table 3. The estimation result indicate that Malaysia's palm oil exports are positively related to world economic activity as proxied by the world industrial production index (LWIPI) at the 1 percent significance level. Positive sign means that world economic activity and export of Malaysia's palm oil are direct relationship. This suggests that a 1% rise in global economic activity would lead to a 2.68% increase in Malaysian palm oil exports to the international market. With its versatility, palm oil plays a crucial role in both food and non-food production industries. This finding aligns with the research of Yusoff (1988); Ernawati et al. (2006); Wong and Ahmad (2017) and Ahmad et al. (2022). According to Statista (2023), world palm oil consumption is recorded at around 78 million tonnes in 2022/23. However, it is predicted to decrease to 77 million tonnes in 2023/2024. In addition, the size of the worldwide palm oil market in 2024 was USD 72.29

billion. However, for the period 2024 to 2034 the figure is projected at USD 121.80 billion with a compound annual growth rate (CAGR) of 5.4% (Precedence Research, 2024).

The price of world palm oil (LWCPOP) is noteworthy and negative, with coefficient value of -0.5627. This states that if palm oil price drops by 1 percent, then the quantity of palm oil exports will rise at 0.56 percent. According to demand theory, price of product and quantity demanded are negative relationship, cateris paribus (Ali, 2021). This mean that the consumer is willing to substitute the expensive to the cheaper product. This finding was similar to Hameed et al. (2016) study in six Asian countries of palm oil export as well as Ahmad et al. (2022) and Lugo-Arias et al. (2024).

Table 3: Estimated long run coefficients using ARDL approach

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LWCPOP	-0.562689	0.201657	-2.790324*	0.0117
LWPSB	0.523336	0.240819	2.173152*	0.0426
LWIPI	2.677005	0.209395	12.78448*	0.0000
LEXRM	0.591664	0.274572	2.154861*	0.0442
LIEX	-0.021368	0.021490	-0.994308	0.3326

*Note: * Significant at 1 percent*

Additionally, the price of soya bean oil (LWPSB) is positively impacted and noteworthy at 1 percent. The affirmative symbol indicates that soya beans and palm oil can be used interchangeably with a coefficient value of 0.52. It indicates that while the price of soya bean oil rose by 1 percent, the amount of palm oil exported rose by 0.52%. This result is pararell with Talib et al. (2007); Awad and Arshad (2008); Hameed et al. (2016); Wong and Ahmad (2017); Ali (2019); Ismail et al. (2022) and Ahmad et al. (2022).

The results of this study show that the exchange rate (LEXRM) is significant and positive relationship, and has an elasticity or coefficient value of 0.5917. A 1% appreciation in currency is projected to drive a 0.59% rise in exports. This result aligns with the findings of Ahmad et al. (2022) and Talib and Darawi (2002), further validating the relationship between currency strength and export growth.

The finding revealed that the Indonesian palm oil export (LIEX) is negative. It means that Malaysia and Indonesia as substitutes in global market as a palm oil's exporter. However, the result is not significant. This means that Indonesia's export level does not affect Malaysia's export level. This is because apart from India and China and Pakistan, Malaysia has ventured into new markets such as Iran, Netherlands, Egypt and Djibouti. Similar result was obtained by Ahmad et al. (2022) who used Indonesian palm oil as a proxy for Malaysia's palm oil export competition in China. In addition, in term of quality, Malaysia's palm oil has better quality compared to Indonesia. This is because production's management in Malaysia is more systematic. In Indonesia, 40 percent of the palm oil supply is contributed by smallholders. in fact, lack of monitoring from the authorities to some extent will affect the quality of palm oil (Alias, 2019).

Short run Error Correction Models

The common method for modelling time series equations is to use an Error Correction Model (ECM). The ECM distinguishes between the long and short term and enables the handling of non-stationary data series. Table 4 displays the ECM findings from this investigation. At the 1 percent significance level, the ECM term is significant and negative. Granger's

Representation Theorem states that a valid error-correcting representation exists when there is a long-term link between variables, and vice versa (Engle and Granger, 1987; Granger, 1983). This study shows that the lagged ECT is -0.5232. It represents that an adjustment towards equilibrium is at a speed of 52.32 percent after the shock. Following that, the market's rate of adjustment was moderate (Wong and Ahmad, 2017). It takes about 2 years (1/0.5232 = 1.911) to achieve back to equilibrium point.

The findings also show that the world palm oil price (D(LWCPOP)) has a negative and significant sign. The coefficient value is -0.2972 implies that if 1 percent drop in world palm oil price will rise about 0.2972 percent of palm oil export. The exchange rate (D(LEXRM) shows a direct and significant effect in the short run with coefficient 0.5255. While, soya bean oil price (D(LWPSB)) and Indonesia palm oil export (D(LIEX)) are positive but insignificant. This explains that rivalry from soya bean oil and Indonesia's palm oil exports does not an effect on export of Malaysian palm oil in the short run.

Even so, the findings for one year and two year deferrals, show the existence of competition at a significance level of 1 percent. This explains that a 1-year delay, Malaysian palm oil exports increased at a minimal rate of 0.03 percent with a 1 percent increase in Indonesian palm oil exports. This can also be interpreted that Malaysia will act more proactively to increase exports even at a minimal rate to compete globally. For example, China as Malaysia's main export destination. Malaysia has signed four Memorandum of Understanding (MoUs) for four areas related to palm oil which involved involving 4 Malaysian businesses and 4 Chinese businesses. First, export of tocotrienol (Kuala Lumpur Kepong Bhd and BOCE trade Service Co Ltd). Second, digital market access (Taobao (China) Software Co Ltd and Able Perfect Group). Third, for crude palm oil trading (Taobao (China) Software Co Ltd and Sawit Kinabalu Group). Finally, application of red palm in animal feed (JF Nutritech and Palmort Food Tech (Shanghai)) (MPOC, 2024). In addition, Malaysia also continues to make strides in exploring the African market. In January 2024, it accounted for 19 percent of Malaysia's total palm oil exports (MPOC, 2024).

Table 4: Error correction represented for the selected ARDL model (3, 3, 3, 4, 4, 3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.875197	0.385432	7.459667	0.0000
D(LXDPOM(-1))	-0.117795	0.131419	-0.896329	0.3813
D(LXDPOM(-2))	0.182408	0.123875	1.472514	0.1573
D(LWCPOP)*	-0.297199	0.070858	-4.194288	0.0005
D(LWCPOP(-1))	-0.033022	0.082170	-0.401871	0.6923
D(LWCPOP(-2))	0.298285	0.078094	3.819573	0.0012
D(LWPSB)	0.077696	0.062277	1.247574	0.2273
D(LWPSB(-1))	-0.078300	0.069658	-1.124057	0.2750
D(LWPSB(-2))	-0.330784	0.071065	-4.654647	0.0002
D(LWIPI)	-0.321478	0.233818	-1.374908	0.1852
D(LWIPI(-1))	-0.372718	0.252927	-1.473621	0.1570
D(LWIPI(-2))	-1.161406	0.287536	-4.039174	0.0007
D(LWIPI(-3))	-0.792339	0.280867	-2.821045	0.0109
D(LEXRM)*	0.525565	0.128943	4.075945	0.0006
D(LEXRM(-1))	-0.227927	0.130004	-1.753224	0.0957
D(LEXRM(-2))	0.397432	0.123053	3.229750	0.0044
D(LEXRM(-3))	0.368509	0.147007	2.506749	0.0214
D(LIEX)	0.011317	0.007535	1.501997	0.1495
D(LIEX(-1))	0.031543	0.008515	3.704290	0.0015
D(LIEX(-2))	0.020532	0.008530	2.407050	0.0264
CointEq(-1)***	-0.523173	0.070799	-7.389550	0.0000

R-squared: 0.855414	Mean dependent var: 0.051128
Adjusted R-squared: 0.734925	S.D. dependent var: 0.085258
S.E. of regression: 0.043895	Akaike info criterion: -3.109296
Sum squared resid: 0.046243	Schwarz criterion: -2.266187
Log likelihood: 90.95917	Hannan-Quinn criter: -2.794994
F-statistic: 7.099544	Durbin-Watson stat: 2.191359
Prob(F-statistic): 0.000007	

*Note: * Significant at 1 percent*

In fact, to expand the market and promote palm oil and its products globally, the Malaysian Palm Oil Council (MPOPC) was established in 1990. Later, in May 2000, the Malaysian Palm Oil Board (MPOB) was formed as the backbone of Malaysia's oil palm industry. It was created to assume the functional roles of the Palm Oil Research Institute of Malaysia (PORIM) and the Palm Oil Registration and Licensing Board (PORLA), which were merged into a single entity.

Meanwhile, the R-squared value is 0.8554. It explains that 85.54 percent of the determinants of palm oil exports are determined by the variables D(LWCPOP), D(LWPSB), D(LWIPI), D(LEXRM) and D(LIEX). Next, the long run and short run parameter stability was examined using the stability tests. This has been accomplished by using the cumulative sum (CUSUM) and cumulative sum of squares (CUSUMsq) tests, as recommended by Pesaran et al., (2001). The graphs of CUSUM and CUSUMsq are displayed by Figures 2 and Figure 3. Both of the figure plots fall between crucial bound at a 5 percent significant level. It means that both at the lower and greater levels, they are inside the critical limitations. It verifies the accuracy of the short- and long-run parameters as well as the stability of the ARDL model for structural breaks. The output of the calculated model is reliable and efficient.

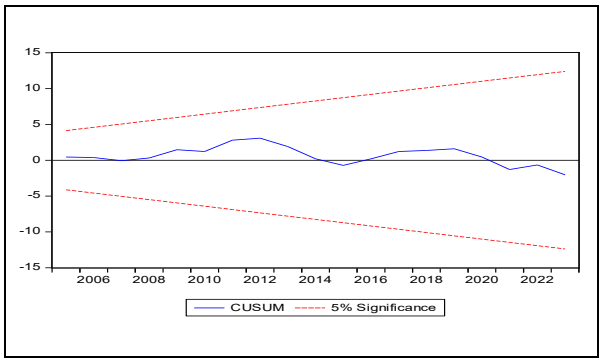

Figure 2 CUSUM test

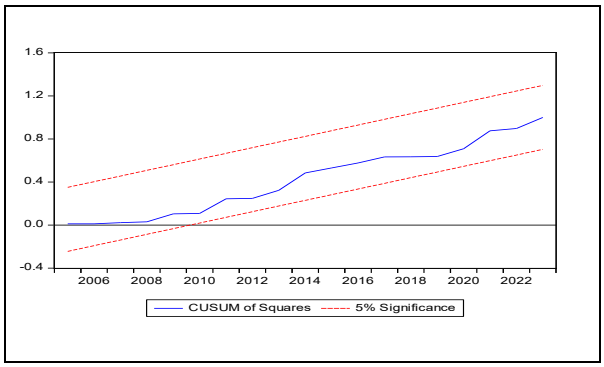

Figure 3: CUSUM SqTest

4. Conclusion and Recommendations

The result of the study proves that there is a link among variables for Malaysian palm oil exports in the world market. Based on the result the most significant determinant in the long run is attributed by world economy activity (LWIPI). The Malaysian export of palm oil in the global market keeps continuing rise as an expanding in world economic activity. The world palm oil price (LWCPOP) is significantly negative factor in attracting demand from the worldwide market that competes with other oils, particularly soya bean oil for short and long run. The exchange rate (LEXRM) is also a significantly positive towards Malaysian palm oil export in the short run and long run. This study also explains that soybean and palm oil are substitutes and significant in the long run. Next, the findings of the study show the existence of competition between Malaysia and Indonesia to penetrate the global market by negative signing but insignificant in the long run. However, in the short run its significant at 1 percent level at year lag 1 and year lag 2. Meanwhile, for competition issues, Malaysia needs to move more actively to explore new markets in the future. This is important because palm oil is the main agricultural commodity as a source of Malaysian exports. Consequently, the results point to a non-price alternative to boost Malaysian palm oil exports to the international market. Non-price tactics including enhancing product quality and uniqueness and highlighting the advantages of palm oil in countering the campaign to denigrate palm oil, especially in EU and USA. In addition, trade matters are important to multiply the marketability as well priority of palm oil from Malaysia in the global market.

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